OBSTETRIC AND GYNAECOLOGY

CASES AND COMMENTARIES

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF MEDICINE (OBSTETRICS AND GYNAECOLOGY) OF THE UNIVERSITY OF DAR ES SALAAM.

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BY
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DR. BWIRE S. B.

DEDICATION

THIS BOOK IS DEDICATED TO THE LATE BERNARD BWIRE MY FATHER, MY MOTHER SYMPHROSA, MY WIFE AGNES AND MY SON BERNARD. Nine kukubali!

DR. BWIRE S. B.

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ABSTRACT

This dissertation is made up of three parts. The first two parts comprises of Ten Gynaecological and Ten Obstetric conditions and commentaries. These are a few selected cases of the conditions managed by the author during his period of residence in the department of Obstetrics and Gynaecology.In each case a thorough history, physical examination and relevant investigations are presented.At the end of each case a commentary is written on one or two silent features of the presented case. This is in form of review of literature, controversies, and the author's opinion.

The third part is comprised of a long obstetric commentary. In this a prospective descriptive study on the magnitude, Obstetric characteristics and pregnancy outcome of preterm premature rupture of membranes at Muhimbili Medical Centre was conducted.

The study revealed a prevalence of preterm premature rupture of membranes to be 3.6%. Majority of them (59.1%) were married, either housewives or peasants. Low birth weighs rate (below 2500g) was particularly high due to prematurity. RDS, neonatal infective morbidities, and perinatal or early neonatal deaths were particularly common.

Mild maternal infective morbidities were commonly found but the severe forms were particularly rare. There was no maternal death among the studied women.

Recommendations are made that further studies need to be done to establish association factors, factors contributing to infective morbidities and establishment of the gestational age where active management can be advocated.

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G1: A CHRONIC ECTOPIC GESTATION IN A MULTIPAROUS WOMAN MANAGED BY LAPARATOMY

Name: Mrs. A.M.

Age: 26 years

Reg. No.: 938448

Residential address: Ilala, Dar es Salaam

Date of admission: 19.10.98

Date of discharge: 27.10.98

SUMMARY

Mrs. A.M. was referred to our hospital with history of amenorrhoea of 10 weeks duration accompanied with symptoms of pregnancy. This was latter followed by low abdominal pain and progressive abdominal distension for one month. Initially the abdominal pain was accompanied with scanty genital bleeding for which her uterus was evacuated at a peripheral dispensary.

On examination she was found to have mild pallor but not icteric. She had a suprapubic mass corresponding to a 20 weeks gravid uterus. An extrauterine pregnancy was suspected. A pelvic ultrasound confirmed the presence of a dead extrauterine pregnancy. At laparatomy an extrauterine gestation sac was found on the left frimbrial end with extensive inflammatory tissues involving the omentum, the gestation sac and intestines. Total left salpingectomy, right tubal ligation and adhesiolysis were done. She had a smooth recovery and discharged home in good condition. The case is presented with a commentary on a chronic presentation of a tubal pregnancy.

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History of presenting illness

Mrs. A.M. was admitted in our gynaecological ward as a referral case from a peripheral health facility with one month's history of low abdominal pain that was dull in nature with no specific periodicity. The pain started insidiously and was persistent although its severity was constant.

This was accompanied by progressive abdominal distension, which had also started a month before. Initially the patient presented with genital bleeding, which was treated at peripheral dispensary with only temporary improvement. Later on the patient continued to have vaginal bleeding that was spotting. These symptoms were preceded by 10 weeks history of amenorrhoea, which was accompanied with nausea, vomiting and breast engorgement. There was no history of palpitations, dizziness or fainting attacks. She had no history of vaginal discharge or fever. She attended a peripheral clinic where a dilatation and curettage was done twice with no improvement.

Gynaecological history

She had her menarche at 15 years of age with regular cycles every 28 to 30 days with painless menstrual periods lasting for 5 to 6 days. She had never been on any form of modern method of contraception.

Obstetric history

She was Gravida 8 para 5 + 2 with five living children. All the deliveries were full term normal deliveries with no antenatal, intrapartum or postpartum complications. The two abortions occurred in first tremister. Both were spontaneous preceded by febrile illnesses. In both of them she had evacuation of the uterus at a peripheral dispensary. There was no history

suggestive of sepsis following the abortions and both of them occurred before her last delivery, which was two years before her presentation.

Past medical history

This was the third time she was being hospitalized. The other two occasions being when she had evacuation of her uterus for incomplete abortions. Otherwise her past medical history was uneventful.

Family and social history

This patient was a peasant, married to a fellow peasant and they were living in Kilwa but she was brought to Dar es Salaam due to her illness. She did not take alcohol nor did she smoke. She had no known history diabetes mellitus or hypertension.

General physical examination

She was ill looking afebrile (temperature 37oC) she was not pale not jaundiced and not cyanotic with a fair general condition. She was not dehydrated and had no palpably enlarged peripheral lymph nodes.

Respiratory system

She had a respiratory rate of 16 per minute, with symmetrical chest movements and normal vesicular breath sound with no added sounds.

Breasts

She had well developed breasts with dark areolar. There was no breast lump palpated.

Cardiovascular system

The pulse rate was 80 beats per minutes regular of good volume and character. The blood pressure in supine position was 100/60 mmHg. The

apex beat was normal non-heaving, and the first and second heart sounds were normally heard with no added sounds.

Abdomen

The abdomen was moving with respiration, there were no therapeutic marks. There was obvious suprapubic distension up to the umbilicus.

There was minimal tenderness on the hypogastrium, with no guarding or rebound tenderness. The liver and spleen were not palpably enlarged. There was a firm suprapubic mass, which was mobile. The mass corresponded to a 20 weeks gravid uterus. There was no shifting dullness and the fluid thrill was negative. The bowel sounds were heard and were normal.

Pelvic examination

The vulva was normal and there was no discharge noted. Speculum inspection revealed a normal vaginal mucosa with normal discharge. The cervix was parous, pink with no obvious lesion. The external os was closed. Cervical excitation test was positive bilaterally. The uterine size could not be estimated as it was obscured by the pelvic mass.

Provisional diagnosis

A chronic ectopic pregnancy was provisionally diagnosed. A differential diagnosis of gestational trophoblastic diseases was also suspected.

Investigations and results

1. An urgent ultrasound was requested and it revealed a bulky uterus with no foetus. However there was a mass arising from the left adnexa with a non-living foetus of about 10 weeks.
2. An urgent heamoglobin level was requested and was found to be 10g/dl.

3. Urine for pregnancy test was Negative

Definitive diagnosis

Chronic ectopic gestation.

Management

- Laparotomy was planned
- The patient's blood was taken for grouping and cross matching and 1000 mls of cross matched blood was requested to be standby.
- In intravenous line was established and the patient was started on infusions with Dextrose saline drip, which was left to run at a moderate speed.
- The patient was counseled about her problem and an informed consent was obtained for anaesthesia and laparotomy. She was counseled about the recurrent nature of the problem and advised for ligation of her other tube as well. She discussed the issue with her husband and agreed.

Anaesthesia

The patient was induced by pre oxygenation, atropine 0.5mg, freshly prepared sodium thiopentone 350mg IV, Cricoid pressure, suxamethoneum 100mg I.V and intubated with a cuffed endotracheal tube size 7.5 enchored at 20 cm. Surgical anaesthesia was maintained with oxygen 5 litres per minute, Halothane 0.5%, Pancuronium 4mg and 50mg of pethidine.

Surgical procedure

The patient was catheterized aseptically and a two-way Foley's catheter was left insitu throughout the procedure. The surgical team scrubbed and dressed with sterile gowns.

With the patient in supine position the abdomen was cleaned twice with iodine and then dried with sterile dry gauze. The patient was then dressed with sterile linen except at the site of incision.

The abdomen was then opened through a sub umbilical midline incision. The identifiable bleeders were clamped and then tied with cut gut suture number 2/0. The rectus shealth was opened by a scalpel at the linea alba, and then the two sides clamped with two long artery forceps. It was then separated from underlying peritoneum by blunt dissection using Mayo pair scissors and then the incision extended proximally and distally.

The peritoneum was held using long artery forceps at two points close to the proximal end of the incisions. This was done to avoid the distal parts where the urinary bladder might be put into unnecessary danger. After thorough inspection and ensuring that there were no viscera clamped, the peritoneum was opened and then with the guidance of the index and middle fingers of the other hand the peritoneal incisions was extended proximally while ensuring the bowels are not on the way. The same was applied in extending the incision distally and the incision was stopped where the peritoneal transparency ended, which marked the beginning of the peritoneal reflection of the urinary bladder.

Findings

There was an old ectopic gestation sac with a dead foetus at the left frimbrial end. There was extensive inflammation and oedema of the left fallopian tube, accompanied with extensive adhesions involving the omentum, loops of the small bowel and the gestation sac forming a ball of tissues, which was felt as

the mass. Both ovaries the uterus and the right fallopian tubes were found to be normal.

What was done

Release of adhesions was done with extra care to avoid bowel injury. The bleeders on the omentum were clamped and tied with catgut number 0. Total left salpingectomy was done and the stumps doubly transfixed with catgut suture No. 2 to ensure haemostasis. The left ovary was conserved. The bowels were further inspected and ensured to be normal. The abdomen was then moped. There was a raw area in the pouch of Douglas with minimal oozing. The visceral, parietal peritoneum, liver and both kidneys were inspected and were found to be normal. Tubal ligation of the right side was done by Pomeroy's method. Swabs and instruments were counted and were found to be correct, then the abdomen was closed in layers, peritoneum with continuous catgut No. 0, Rectus sheath with continuous vicryl No. 1 and skin with interrupted sutures of silk No. 0 Estimated blood loss was 600mls.

Reversal of anaesthesia

The patient was reversed with intravenous Atropine 1 mg, intravenous Noestigmine 2.5mg, suction, and oxygenation 6L/ min. When spontaneous respiration was established the patient was extubated. In recovery room the patient was found to be in good condition, with pulse rate of 90 beats per minute, blood pressure of 120/70mmHg. She had spontaneous respiration of 20 breaths per minute. She was discharged into gynaecological ward while fully awake.

Postoperative orders

- She was prescribed Pethidine 100mg 8 hourly for 24 hours.

- Intravenous Normal saline was alternated with Ringers lactate a total of 3 litres for 24 hours.
- The vital signs were to be monitored hourly for the first 6 hours and then four hourly.
- Input and output charts were to be kept.

Postoperative recovery

Within the first 24 hours the patient was progressing well with stable vital signs. She was afebrile and not jaundiced. The abdomen was soft the wound site clean and the bowel sounds present. The patient had received 2800 mls of fluids and had produced 1500 mls of clear urine. Intravenous fluids were discontinued and the patient encouraged to take small amounts of oral fluids and to ambulate. She was seen again on the same day with fever and vomiting. A blood slide for malaria parasites was taken and was found to be positive. The patient was started on chloroquine injections 200mg 8 hourly intramuscularly for 24 hours and then to continue with Tablets of Chloroquine 600mg on second day and 300mg on third day. She completed the treatment and the fever subsided. The rest of her postoperative period was uneventful. She was discharged on 7th post operative day with Haemoglobin of 9.8 g/dl and was put on Iron and folic acid tablets and was advised to attend at our gynaecological outpatient clinic after 6 weeks.

Follow up

She was seen at the gynaecological out patient clinic with good general condition. She was not pale and had resumed her normal menses with no problem. She was discharged from the clinic in good condition.

COMMENTARY

Ectopic pregnancy is the greatest masquarader of many gynaecologic conditions there is no other pelvic condition gives rise to more diagnostic errors as this one. It occurs in 0.25 - 14% of all pregnancies and accounts for 9% of all pregnancy related deaths.

Since all sexually active women in their reproductive age are prone to this serious life threatening condition, its correct diagnosis and prompt treatment is important. It is particularly important in developing countries where the condition is more common and complicated by lack of or inadequacy of diagnostic facilities.

Although there are factors that put some women in an increased risk of having an ectopic gestation, some women do not have any of these factors. These factors include a history of previous ectopic pregnancy, (recurrence rates is10%) documented previous salpingitis resulting in tubal damage, women with history of infertility or sub fertility. Other factors include a history of previous pelvic surgery , women aged 35 years or older, intrauterine contraceptive device users and in utero exposure to Diethyl stilboestrol[1].

Out of all these, Mrs. A.M. presented with history of pelvic surgery only (evacuations of uterus) which she had for abortions, from which she had apparently recovered un eventfully.The possibility of a subclinical salpingitis remains a real reality. Perhaps the other risk factor is her black race, which is also said to be a risk factor [1]. Her high parity makes suspicion of an ectopic pregnancy even more difficult.

Clinical presentations of such patients vary greatly. The patient may or may not have any symptoms pointing to pregnancy. Pelvic pain with or without amenorrhoea is probably the commonest symptom but the severity and characteristics of the pain also vary. Mrs. A.M. did not present with the dramatic acute abdominal symptomatology which is commonly encountered in such patients, and which has no diagnostic problem. In developed world this acute dramatic presentation occur in only less than 25% of the patients. However in our set up this acute presentation is the commonest. Probably this may be due to the health seeking behavior of our population who tend to ignore mild symptoms, and especially so during pregnancy.

Most patients present with amenorrhoea and the last "normal" menstrual period is described to be lighter than normal. This is usually not a true last normal menstrual period as it probably represents bleeding, secondary to inadequate ovarian steroid levels. In one third of cases the last normal menstrual period cannot be recalled, further contributing to the diagnostic dilemma.

Irregular vaginal bleeding which is scanty as a result of sloughing of decidua is noticed in 50-80% of the patients[2]. This was one of the classical symptoms presented, but it was probably thought to be due to a different pathology and possibly that is why she had dilatation and curettage two times at a peripheral hospital two weeks before being referred to this centre.

On clinical examination, abdominal tenderness is the commonest sign often with rebound. But this occurs in only less than 25%. This patient had mild tenderness and had no rebound tenderness. Shifting dullness and fluid thrill will only be elicited in patients with significant haemoperitoneum, which this

patient did not have. It is therefore not uncommon to miss a diagnosis in such patients. There may be a series of small bleeds where by the circulatory systems adjust itself and therefore the symptoms improve with time. This might result in a diagnostic delay as happened to this patient. This patient presented with a mass, which was mobile, equivalent to a 20 weeks gravid uterus, which further complicated the picture. The sub acute presentation with resultant inflammatory process involving the viscera was responsible for the ball of tissues seen intraoperatively.

In this group, the prospect for early treatment is therefore dependent on maintenance of a high index of suspicion and development of few additional diagnostic tests whose choice is dictated by local availability and cost.

Although biochemical diagnosis of an ectopic pregnancy is thought to be a key test[3], still there is a possibility of having a false negative depending on the sensitivity of the test. It might be negative as it was in this patient although the explanation in this case is likely to be due to death of trophoblastic tissues. Serial levels of human chorionic gonadotrophins may be useful in following the patient especially in early pregnancy [3] but a 48 hour waiting time for interpretation may be fatal. Due to these limitations, an ultrasound is most of the time necessary to supplement the biochemical test.

An ultrasound is important for localisation of the site of an ectopic. Trans vaginal ultrasonography using a high frequency transducer has contributed to advances in this area as compared to abdominal ultrasound [4]. However even in this, an ectopic embryo is seen in only 20% of cases [4]. In others there many be no sonographic features that assist in diagnosis. The predictive value of trans-vaginal ultra sound is therefore still uncertain; as it depends

on the experience of the operator. A normal pregnancy should be highly suspected when no sonographic features are seen.

With this picture and limitations of the diagnostic aids a high index of clinical suspicion remains the most important diagnostic tool of this life threatening condition in our environment, and the risk of leaving an ectopic pregnancy unattended far outweighs the risk of doing a laparatomy in a patient who is suspected to have an ectopic and find none.

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G2: UTERINE MYOMA WITH MENORRHAGIA: MANAGED BY MYOMECTOMY

Name:	Miss. E.K.
Age:	28 years
Reg. No.	936989
Residential address:	Kinondoni- Dar es Salaam.
Date of admission:	3.12.1998
Date of discharge:	11.12.1998

SUMMARY

Miss E.K. was nulliparous at 28 years. She presented to our gynaecological out patient clinic with history of an insidious on set of a painless low abdominal swelling, which was progressively increasing in size. This was accompanied with history of menorrhagia with occasional passage of clots. Clinical examination revealed a firm irregular supra pubic mass equivalent to a fourteen weeks gravid uterus. A diagnosis of uterine myoma with menorrhagia was made. Myomectomy was done followed by uneventful recovery and relief of symptoms. The case is presented and a commentary on clinical presentation and various treatment modalities of uterine myoma is discussed.

History of present illness

The patient was seen in our gynaecological clinic with history of a progressive intra abdominal swelling, which had started one year before. The swelling was painless but the patient was complaining of pain during her menses, which were also prolonged since the onset of the problem. Prior to this

problem, the patient used to get her periods for 3-4 days but of late her periods have been lasting for 7-10 days with clots and more so during the 3rd and 4th day of the periods necessitating frequent changing of her sanitary pads. She denied history of intermenstrual, contact bleeding or abnormal vaginal discharge. There was no history of palpitations, dizziness or fainting attacks. She also had no urinary or bowel symptoms. She had no history of nasal bleeding or bleeding from the gums. There was no history of swelling of lower limbs and she had no symptoms of pregnancy.

Gynaecological history

She attained menarche at 16 years and had no menstrual problem until this problem started. She had never been on any contraceptive method.

Obstetric history

She was nulliparous but had an abortion twelve years before at 3 months. Her uterus was evacuated and she was discharged in good condition.

Past medical history

This was her second hospitalization, the first one being that due to a spontaneous abortion. She had no history suggestive of allergy to any drug.

Family and social history

She was not married but was living with a man who was a petty trader. She was also a petty trader. Occasionally she used to drink alcohol but she never smoked cigarettes.

General physical examination

She was a well nourished young woman afebrile moderately pale not icteric not cyanotic with good general condition. Her temperature was 36^{o}C.

Respiratory system

The respiratory rate was 20/minute and there was no obvious abnormality detected. The breath sounds were normal bilaterally with no added sounds

Breasts

Were normal with normally darkened areola and no lump was felt.

Cardiovascular system

The pulse rate was 80 beats per minute regular and of good volume and character. The blood pressure was 110/80.mmHg. The first and second heart sounds were heard normally with no added sound.

Abdomen

There was no distension, the abdomen was moving with respiration. There were no therapeutic marks, and no area of tenderness. The liver, and spleen were not palpably enlarged. There was a supra pubic mass which corresponded to a fourteen weeks gravid uterus which was firm with irregular margin and mobile. The mass was extending to the pelvis. There was no shifting dullness and no fluid thrill and the bowel sounds were heard normally.

Pelvic examination

There were minimal blood stain on the vulva and vagina. Speculum examination revealed a few small blood clots in the vagina, the cervix was healthy and pink, and there was no obvious lesions seen. Bimanual examination revealed a firm nodular pelvic mass described above which was attached to the uterus and there was no adnexa mass felt. The examining finger was slightly stained with blood, and it was not foul smelling.

Provisional diagnosis

Uterine myomas with menorrhagia.

Investigations and results

1. A full blood count was requested and revealed a haemoglobin of 10.1 g/dl with normochromic normocytic red blood cells. The white blood cell count and distribution was normal.
2. Midstream urine was taken for culture and sensitivity and revealed no significant bacterial growth.
3. A pelvic ultrasound was requested and revealed a bulky uterus with multiple hypoechoic masses of varying sizes within the walls of the uterus. No adnexa mass was noted.
4. Serum creatinine was 75 umol/litre.
5. Premenstrual diagnostic D & C was done and revealed normal secretory phase endometrial tissues with no atypia.
6. Tubal patience test was done and both tubes were found tobe normal with bilateral spillage of contrast.

Definitive diagnosis

Uterine myoma with menorrhagia.

Management

The patient was counseled about her problem. Since she was nulliparous, myomectomy was planned but she was also counseled for total abdominal hysterectomy if the need arose intraoperatively. and she accepted.

Preoperative preparation

- Blood grouping and cross-matching was done and 1000 mls of blood reserved for the procedure.
- The patient consented for both anaesthesia and surgery.
- She was fasted from midnight of her day of surgery.

Anaesthesia

The patient was put in supine position and an intravenous line established with gauge 18 canula. She was pre oxygenated and then, induction of anaethesia was achieved by Atropine 1mg intravenously, Freshly prepared sodium thiopentone 375 mg intravenously, and 100mg of intravenous suxamethonem. The patient was intubated with a cuffed Endotracheal tube size 8.5. Surgical anaesthesia was maintained with inhalation of oxygen 5 litres per minute and 1% halothane. She was also given Pethidine 100mg and Pancuronium 4mg intravenously.

Surgical procedure

With assistance the patient was catheterised under aseptic condition and about 200mls of clear urine obtained. The catheter was left insitu throughout the procedure. The surgical team scrubbed and dressed with sterile gowns.

The patient's abdomen was doubly cleaned with weak iodine and then dried with dry gauze. The patient was draped with sterile linen except at the incision site. The abdomen was then opened in layers through a Pfanenstiel incision. The bleeders being clamped by curved small artery forceps, and then tied with catgut No.2/0. The abdomen was then entered

Findings

There were multiple myomas of varying sizes (1-3 cm) mainly intramural both anteriorly and posteriorly. There was a large subserosal pedunculated myoma approxiamately 10 cm in diameter at the fundal area. Both fallopain tubes and ovaries were found to be normal.There were no adhesions and the right ovary showed a luteal cyst which was evidence for recent ovulation.

What was done

- Myomectomy was done.
- A self-retained retractor was applied to enhance exposure.
- The bowels were packed and pushed away from the operation field using tagged abdominal packs.
- A rubber tube tormiquent was applied around the lower part of the uterus so as to minimise bleeding and to offer a relatively bloodless operation field.
- All anterior uterine myomas were removed through one incision, which was put vertically very close to the midline plane. The posterior myomas were also removed through one vertical incision. A relatively avascular area, which would easily facilitate accessibility of as many myomas as possible through one incision, was chosen before making a uterine incision.
- After putting an incision, the capsule was found for each myoma and then using Mckindoe pair of scissors, the fibroids were dissected all around and then held by a Little-wood's tissues forceps before being enucleated.

This was done while an assistant is exerting compression to minimize bleeding.

After all the myomas on anterior aspect were removed, the dead space was obliterated using figure of eight sutures, of catgut No. 2 and heamostasis achieved. The same technique was used to remove the myomas on the posterior aspect. While attempting to remove myomas on the anterior aspect the uterine cavity was accidentally entered.

Minimal handling of tissues was emphasised throughout surgery so as to prevent postoperative complications such as adhesions. The pedunculated myoma on the fundal area was transfixed with catgut No. 2 suture and resected. The serosa was closed with mattress sutures of catgut No. 2/0. The tourniquet was released and haemostasis was ensured. 20 mls of Dextran 70 was instilled in the peritoneal cavity, swabs and instruments were counted and declared correct then abdomen closed in layers. Peritoneum was closed with continuous catgut Number 2/0, rectus sheath repaired by continuous vicryl number 1, and skin closed by subcutaneous continuous prolene number 2/0 stitch. Estimated blood loss was 500mls.

Reversal of anaesthesia

The patient was reversed by Neostigmine 2.5mg intravenously, 1mg of atropine intravenously, oxygenation, and suction. The patient was then extubated after establishing spontaneous respiration. She was transferred to recovery room and later on discharged to the gynaecological ward while fully awake.

Postoperative orders

She was prescribed intravenous injection of Pethidine 100mg 8 hourly for 24 hours, injection Ampicillin 500mg 8hrly for 48 hours, injection chloramphenicol 500mg 8hrly for 48 hours. Intravenous fluids of Ringer's lactate to be alternated with Dextrose saline, 3 litres for 24 hours. An indwelling catheter was left for 24 hours, and monitoring of patients vital signs was ordered.

In the first 24 hours the patient was in good general condition, she was not pale, afebrile with no serious complaints. She had stable vital signs. She had received 2200 mls of fluids and had produced 800 mls of clear urine. There was minimal vaginal bleeding. On the third postoperative day the bleeding persisted but there was no foul smelling discharge per vagina and no fever. She was allowed to continue with oral Ampicillin and Chlorampenicol for another 3 days. Haemoglobin was checked on the 4th postoperative day and was found to be 10.2g/dl. On the seventh postoperative day the patient was in good condition, the wound had healed by primary intetion stitches were removed and the patient was discharged and instructed to come at gynaecological clinic after six weeks.

Follow up

After six weeks she was seen at gynaecological outpatient clinic where she was found to be in good condition. She had resumed her menses and they were normal of four days duration but with occasional spotting. There were no clots. She was seen again three months latter and was found to be healthy with regular cycles and periods of five days with no clots.

She was counseled about the procedure and was advised to report to a hospital whenever she gets pregnancy, and she should be delivered by caesarean section due to the fact that the uterine cavity was entered during the procedure.

COMMENTARY

Uterine myomas are the commonest of all pelvic tumours. They are composed of essentially myometrial smooth muscle tissue although they may contain fibrous connective tissue as well especially in the larger tumours [1].

Myomas usually grow slowly although this is only a generalization as the rate of growth vary from patient to patient and from time to time in the same patient. There may be waves of growth interspersed with phases of quiescence. Degenerative changes can cause a rapid and gross enlargement of the tumour. An arrest or slowing of activity is most likely after the menopause although at least 10% of myomas continue to grow even after this time [1].

These tumours cause problems only in the childbearing age. They are quite rare before puberty. It is estimated that 20% of all women over 35 years of age have myomas, although frequently without symptoms[2]. For unknown reasons, the incidence is much higher in the black than in the white races. They are more common in nulliparous women or relatively infertile women, but it is not known whether sterility cause fibroids or vice versa, or whether both conditions have a common cause. Miss E.K. was nulliparous at 28 years of age and therefore fell in this group.

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Clinical presentation of myomas depends on the site. The presence alone does not necessarily produce symptoms and it is not uncommon for even large tumours to be entirely symptom free [2]. Submucosal fibromyomas are the most symptomatic. Menorrhagia is common, usually as a result of abnormal vessels stretched over the surface and increased endometrial surface. With an intramural fibromyoma, impendence of venous return from the endometrium may produce heavier flows. Endometrial hyperplasia is noted in some patients due to hyper-oestrogenism[2]. Intermenstrual bleeding or contact bleeding may be presenting features especially in a pedunculated submucous myoma which encroaches in the cervical canal or ulcerating cervical myoma.

Indications for treatment include abnormal bleeding, rapidly enlarging mass severe pelvic pain, pressure symptoms, suspicion of torsion uncertainty of the tumour or when a patient presents with unexplained infertility.

The treatment may be surgical, medical or combination of the two depending on the severity of symptoms, age, size, site, number of tumours and the need of future reproduction.

This patient presented with heavy bleeding, secondary dysmenorrhoea and a pelvic tumour which was progressively increasing. She also presented with secondary infertility and therefore surgical treatment was indicated. Myomectomy was preferred in this patient considering her age and her future reproductive needs. However, counseling for possible hysterectomy is important as it might be necessary intraoperatively. Under these circumstances a meticulous technique is needed to help avoid formation of

adhesions that might later cause infertility. Other surgeons use dilute vasopresin (10units in 30 mls of saline) to dramatically reduce blood loss[3] and therefore lower the chance of adhesion formation. This was not necessary in this patient as application of a rubber tourniquet significantly minimised blood loss. Temporary occlusion of uterine arteries and ovarian arteries using atraumatic vascular clamps may also help in this. These were not important after application of the tourniquet. Choice of incision site is important to allow extraction of tumours with minimum incision lines, as well as prevention of adhesions to the tubes, ovaries and especially small bowel and omentum. This will prevent long term complications such as intenstinal obstruction or infertility[3]. Care must also be taken to prevent direct damage to the tubes and scarring of the endometrium.

One disadvantage of myomectomy is the chance of recurrence, which is likely to occur in 5-10% of patients[2], depending on age. But in most of the patients this is delayed significantly to allow adequate opportunity for conception.

Hysterectomy should be considered in women who have completed their reproductive needs. In young patients who still have reproductive future, it should be reserved only in those symptomatic patients in whom myomectomy is technically impossible. It should also be considered in life threatening bleeding, rapidly enlarging mass in perimenopausal women and tumours whose nature is uncertain.

Medical treatment has a room in management of fibroids. Progestational or antiprostaglandins therapy may be of value in controlling heavy periods if the patient is young or does not want surgery[2]. Recently danazol and tamoxifen

have been tried to suppress ovarian activity in such patients. Luteinizing hormone releasing hormone is another promising analogues, with significant short-term results in reduction of fibromyoma. However extensive studies are needed to evaluate their side effects so as to be weighed with the advantages. Gonadotrophins releasing hormone agonists such as triptoeins has shown to reduce the tumour sizes, reduce intraoperative blood loss and operation time, and has been used in preparing patients before surgery[4]. It is also associated with higher levels of haemoglobin and haematocrit. This is possibly due to reduction of estrogen levels and devascularisation of the tumour. The induced amenorrhoea also contributes significantly to increase of haemoglobin. However in such patients re growth ensures 12 weeks after stopping treatment and in most cases surgical treatment cannot be avoided.

Recently in the developed world, more conservative surgical approaches are employed where by laparoscopic uterine artery embolisation has achieved significant reduction in the tumour sizes without need of open surgery. However the long-term effects are not evaluated. Hysteroscopic guided myomectomy of submucous myomas is also possible. But this approach is only suitable in patients with small symptomatic submucous fibroids.

In conclusion myomectomy remain one of the important surgical approach in symptomatic young women with uterine myoma and whom reproductive capability has to be conserved.

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G3: CHORIOADENOMA DESTRUENS: MANAGED BY TOTAL ABDOMINAL HYSTERECTOMY AND CHEMOTHERAPY.

Name: Mrs. H.F.

Age: 29 years

Reg. No. 943132

Residential address Mtibwa –Morogoro.

Date of admission 26.11.98

Date of discharge 25.3.99

SUMMARY

Mrs. H.F. was referred to us from a peripheral hospital. She presented with a six months history of abnormal vagina bleeding, which was irregular and occasionally profuse with clots. This happened following a spontaneous abortion of which evacuation of her uterus was done. On examination a sessile red-purple cervical mass was noted. A diagnosis of cervical polyp was suspected. While in the ward for work up, she started bleeding profusely necessitating an emergency examination under anaesthesia, which was followed by total abdominal hysterectomy. Intraopeatively the uterus was found to be smooth, soft and boggy. The ovaries were having multiple cysts of varying sizes. Placenta-like tissues mixed with cystic grape-like materials were found invading the right wall of the uterus. A clinical diagnosis of chorioadenoma destruens was made. Post operatively she was further investigated by estimating the levels of βhCG and the diagnosis was confirmed. She was treated with six courses of methotrexate and was discharged in good condition for follow up. While this case was being prepared for write up the

patient was still on follow up she was still in good condition. The case is presented with commentary on management of chorioadenoma destruens.

History of presenting illness

Mrs. H.F. presented to our gynacological ward as a referral patient from Mtibwa sugar company with six months history of abnormal vagina bleeding which followed spontaneous abortion of an 8 weeks pregnancy of which she did not see any foetus. The bleeding was occasionally profuse with clots and had no specific periodicity. She had episodes of inter-menstrual bleeding and contact bleeding. These symptoms were accompanied by nausea and breast engorgement but there was no obvious progressive abdominal distension. She had no any abdominal swelling accompanied with the symptoms. She also complained of low abdominal pain dull in nature with no specific periodicity. The pain had no aggravating or relieving factors and it was not radiating. There was no vaginal discharge but she complained of painful micturition with increased frequency. She had no palpitations dizziness or fainting attacks. However she had a mild dry cough with no haemoptysis. She had no headache or blurring of vision and she had no history of passing grape like material per vagina. She had attended different health facilities for this problem and various medications were given with no improvement. Her uterus had been evacuated several times with no improvement. No tissues were taken for histology in any of them.

Gynaecological and menstrual history

She had her menarche at 16 years of age with regular cycles of 28 to 30 days with periods lasting for 3 days accompanied with mild discomfort of which she did not use any medication.

Obstetric history

Mrs. H.F. was para 1 + 3 with only one living child who was 6 years old. Her delivery was uneventful.Following this delivery she experienced three spontaneous first tremister abortions, and all of them were followed by evacuation of her uterus, the last one being that preceding the presenting illness.

Past medical history

This was her only episode of hospitalisation therefore her past medical history was uneventful. She had no history suggestive schistosomiasis and had no history of chronic illness in the past.

Family and social history

She was a housewife married to an agricultural officer. She did not drink alcohol nor did she smoke. She had no family history of diabetes mellitus or hypertension and had no family history suggestive of bleeding disorders.

General physical examination

She was ill looking, obese and not in pain. She was not jaundiced, not pale and with no cyanosis. She had no palpably enlarged peripheral lymph nodes.

Respiratory stem

She had normal spontaneous respiration with respiratory rate of 18/min with bilaterally symmetrical chest expansion. There was normal percussion note and breath sounds were normal vesicular with no added sounds.

Breasts

She had well developed breasts with normal areolar tissue. The breasts were engorged, mildly tender but there was no palpable breast lump.

Cardiovascular system

She had a pulse rate of 90 beats per minute regular and of good volume and character. The blood pressure was 120/80mmHg in supine position, the first and second heart sounds were heard normally and there were no added sounds.

Central nervous system

She was fully conscious well oriented to time place and person. Visual acuity and visual fields were normal. the cranial nerves were normal

Abdomen

She had a protuberant abdomen that was moving with respiration. There were no therapeutic marks. There was slight tenderness on the hypogastrium with no rebound tenderness and no guarding. The liver, spleen and kidneys were not palpably enlarged. The uterus was found to be enlarged corresponding to a 14 weeks gravid uterus with smooth and regular margins. It was freely mobile. There was no shifting dullness and no fluid thrill.

Pelvic examination

The vulva and vagina were normal with minimal vaginal bleeding. The urethra and vaginal mucosa were healthy. There were no vaginal nodules seen. Speculum examination revealed a non-pedunculated purplish-red cervical mass arising from the right side of the cervix. It was about 3 cm in diameter, smooth and was not bleeding. The rest of the cervix was healthy and normal. There was blood trickling from the uterus through the external os. The uterus was confirmed to be enlarged through bimanual examination, and there were no adnexal masses felt.

Provisional diagnosis

A cervical polyp with menometrorrhagia was suspected.

A differential diagnosis of gestational tropphoblastic disease was also suspected.

Investigations

Urine for pregnancy test was taken and was found to be positive.

While in the ward before other investigation results were available the patient developed profuse vaginal bleeding which was accompanied with passage of big clots. An urgent blood grouping and cross-matching was done and 1000 mls of whole blood requested and reserved.

An intravenous line was established with a 16 gauge cannula.

A speculum examination was done and the bleeding was seen to be coming from the uterus. It was fresh and bright red. The cervical mass seen was not bleeding at this moment,

Management

A fast running intravenous infusion was started, and blood was urgently ordered from the blood bank. The patient was booked for an emergency examination under anaesthesia with a possible plan of total abdominal hysterectomy. Resuscitation of the patient was continued with rapid intravenous infusion of Ringer's lactate and normal saline through the inserted cannnula. She received 3 litres of fluids in one hour while preparations were being made for surgery. Immediately before surgery the patient's condition was fair, the pulse rate was 100 beats per minute and of good volume. The blood pressure was 110/70 mmHg. She was rushed to the operating theatre for examination under anaesthesia.

Anaesthesia

The patient was induced by crush induction with pre oxygenation with 6 litres per minute, Atropine injection 1mg start, fresh prepared sodium thiopentone injection 250mg and injection suxamethoneum 100mg. She was intubated with a cuffed endotracheal tube size 7.0 and it was anchored at 20cm.

Maintenance of anaesthesia

Mrs. H.F. was maintained in surgical anaesthesia with oxygen 6 litres per minute, 0.5% halothane and 4mg of pancuronium injection.

Procedure

With the patient in lithotomy position the perineum was cleaned with dettol and then dressed with sterite towels. The patient was catheterised to empty the urinary bladder and 200 mls of clear urine was obtained. Examination under anaesthesia was done, but this was followed by profuse bright red bleeding from the uterus, which obscured visualisation of the cervix and the bleeding site. So further examination was abandoned, and total abdominal hysterectomy was decided up on.

The surgical team re-scrubbed while the patient was being returned in supine position. The patient was then cleaned with weak iodine and then dried with sterile dry gauze. She was then draped with sterile linen, leaving only the incision site.

The abdomen was opened through a sub-umbilical midline incision and entred as described in gynaecological case No.1

Findings

The uterus was found to be enlarged soft and boggy with smooth surface. There were no uterine myomas. The ovaries were enlarged and had small multiple cysts bilaterally. The fallopian tubes were normal. There were no adhesions and no intraperitoneal haemorrhage.

What was done

Total abdominal hysterectomy was performed.

The left round ligaments was doubly clamped close to the uterine end and then resected. The line of cleavage between the two layers of the peritoneum was identified and the two layers separated to visualise the left ureter and push it down. The same procedure was applied on the right side. The stumps were transfixed with chromic catgut suture No.2.

The two incisions made were extended anteriorly to the lower segment of the uterus and a line of cleavage between the uterus and uterovesical peritoneal reflection identified. The peritoneum was separated from the uterus and deflected distally so as to push the urinary bladder together with ureters away from the operation field. Then the left ovarian ligaments and the fallopian tubes were doubly clamped close to the uterus and then resected. The stumps were doubly transfixed with chromic catgut suture No. 2. The same procedure was performed on the right side so that both ovaries were conserved.

The left uterine vessels were doubly clamped at the level of the isthmus of the uterus then divided and doubly ligated with chromic catgut suture No. 2. The same was done on the right side. The uterosacral ligaments were then clamped on both sides and were divided.

Lastly, the transverse cervical (cardinal) ligaments were clamped with a long straight Kocher's forceps and were divided. The vagina was then opened anteriorly by using a scalpel, and the vault held with Littlewood's tissue forceps. This was extended laterally on both sides and then posteriorly and the cervical mass was removed together with the uterus. A piece of gauze soaked in iodine was inserted in the vagina using a long dissecting forceps, which was later discarded. The cardinal ligaments were then stitched together with the uterosacral ligaments, the stumps of uterine vessels and the lateral angles of the vaginal vault. The vaginal vault was then closed, by continuous stitches using vicryl suture No 1 so that the vault is closed in an apex.

The uterus and the cervical mass were then opened and were found to have infiltration of haemorrhagic reddish- purple placenta like tissues mixed with small grape like cysts penetrating into the myometrium, and the cervix. The tissues penetrated deeply the lateral uterine wall to the entrance of the uterine vessels. A clinical diagnosis of chorioadenoma dextruens was highly suspected with a differential diagnosis of choriocarcinoma. The abdomen was the mopped and haemostasis ensured. The swabs and instruments were counted and pronounced to be correct, then the abdomen closed in 3 layers. The peritoneum with catgut No. 0, rectus sheath with continous vicryl No. 1 and intermittent locking, skin with interrupted silk No. 0.Estimated operative blood loss was 500 mls. However total blood loss was 1500 mls.

Reversal of anaesthesia

The patient was reversed with injection Neostigmine 2.5mg, injection Atropine 1 mg. Suction, oxygenation and then after establishment of spontaneous respiration, extubation was done. In recovery room the patient was fully awake

with pulse rate of 100/mm and a blood pressure of 120/80mm Hg. She was discharged to the gynaecological ward.

Postoperative orders

- She received 500 mls of blood intraoperatively.
- The patient was prescribed intravenous fluids Ringers lactate 3 litres for 24 hours.
- She was given Pethidine injection, 100mg intramuscularly 8 hourly for 24 hours.
- Pulse rate, blood pressure and respiratory rate were checked hourly for the first 6 hours then four hourly there after.
- Temperature was checked 4 hourly for 24 hours then twice daily there after. She remained afebrile.
- Injection Ampicillin 500mg 8 hourly for 24 hours then capsules ampicillin 500mg 8 hourly for 5 days.
- The vaginal bleeding had to be observed closely.
- Continuous bladder drainage was ordered for 24 hours.

Three hours post operatively she was reviewed and was found to be in stable condition. She was fully awake the vital signs were stable the abdomen was soft and there was no observable vagina bleeding. The input and output were well balanced.

24 hour post operative the patient was stable but looked pale, vital signs were stable, input output well balanced and there were no more genital bleeding. The infusions were discontinued and indwelling catheter removed and the patient was started on oral feeds.

Imferon Injections 5mls on each gluteal region once daily for four days was prescribed. On the third day her haemoglobin was checked and was 8.7g/dL. She continued with iron and folic acid tablets.

She had a good progress and on the 6th day all the stitches were removed. However the patient developed cough which was accompanied with hemoptysis with no fever, or shortness of breath. Sputum for AFB was taken and was found to be negative.

Investigation results

The investigation results were obtained and these were as follows:-

1. Urine for pregnancy test was positive.
2. Serum βhCG were found to be > 675 mu/L
3. A full blood count revealed Haemoglobin of 10.3 g/dL

   RBC count $4.23x10^{12}$ /L

   RBC normochronic normocytic

   Platelet count 377 x $10^3/mm^3$

   WBC total 8.4 $x10^3/mm^3$.

   Lymphocytes 32%.

   Monocytes 7.2%

   Granulocytes 60.8%

   All of them were within normal ranges.
4. Serum creatinine was 50 momol/L
5. The liver function tests were normal.
6. A chest X-ray revealed 3 canon balls of about 3cm in diameter each.

7. The histology result revealed anaplastic syncitial and cytotrophoblastic cells with identifiable chorionic villi infiltrating into myometrial fibers and the cervical stroma. These features were consistent with invasive mole.

With these results, the patient was started on treatment for high risk metastasising (invasive) mole. However choriocarcinoma could not be excluded. She was started on oral methotrexate 15mg once daily, for five days, with resting intervals of one to two weeks between each course of treatment depending on recovery from the side effects. Intramuscular injections of 5mg folinic acid were given in alternate days during treatment to minimise side effects.

After the first course of treatment, the cough and haemoptysis subsided. However the serum levels of βhCG were still > 675 mu/L. The liver function test, renal function test, and haemopoietic function were within normal limits indicating minimal toxicity.

After finishing the second course, the levels of βhCG were 500 mu/L. With subsequent treatments, there was a rapid fall of serum βhCG levels with very minimal toxicity symptoms. She received a total of 6 courses throughout her stay in hospital and the last two courses were given when the serum βhCG levels were un detectable and the pregnancy test was negative. She had three consecutive negative βhCG results before she was discharged. On discharge her chest X-ray was normal and she was counselled about her problem and was discharged home in good condition. She was given an appointment to come for follow up after one month at our gynaecologiacal out patient clinic.

Follow up

A month after discharge from the ward she was seen at the gynaecological clinic with good condition. She had no cough, no haemoptysis no any abnormal bleeding. The examination of the respiratory system revealed no abnormality, the wound had healed well with no complication, and there was no suspicious lesion on pelvic examination. The serum βhCG and the urine for pregnancy test were negative and the chest radiography was normal. She was allowed to go home after taking another specimen of blood for serum βhCG. She was seen again on monthly interval for 3 more months and the findings were the same.

Until this case is being prepared for a write up, this patient was still on follow up on three monthly intervals and was still in good general condition and co-operative on follow up regimen.

COMMENTARY

Gestational trophoblastic disease comprise of a group of conditions derived from the trophoblast. They are all potentially malignant tumours.

The global incidence of gestational trophoblastic disease has been reported to be higher in oriental countries than in Western countries, but even in oriental counties the rate varies considerably [1,7].

Two of the most important advances in the management of gestational trophoblastic disease have been the standardisation of the terminology and the concept of risk assessment based on classification or staging systems which allow rationalisation of treatment[2]. Gestational trophoblastic disease is unique as the prognosis depends not only on the anatomical extent but also the

presence of other prognostic factors. Therefore a staging system similar to that used in other cancers does not apply to this diseases[2].

The diagnosis of invasive mole was suspected intraoperatively and confirmed histologicaly by the presence of villi which distinguish invasive mole and choriocarcinoma. Presence of villi in the histological specimen of this patient excluded the diagnosis of choriocarcinoma.

Surgery is usually the treatment of choice for invasive mole. This is dictated by its common presentation of severe and occasionally life threatening uterine bleeding as it was observed in this patient. Sometimes perforation of uterus occurs leading to internal haemorrhage. However, if diagnosis is suspected early and there is less bleeding as it may occur, chemotherapy could be used so as to conserve the reproductive function. This need was obviated by the life threatening bleeding that this patient had.

Since choriocarcinoma could not be clinically excluded in this patient, based on available evidence, chemotherapy was indicated in this patient as surgery alone was thought to be sub-optimal.

Methotrexate is recommended by WHO as the drug of choice in such circumstances. This is due to its efficacy as reported Worldwide. However, other drugs have been tried elsewhere with good results. A comprehensive study of choriocarcinoma and its allied diseases was carried out in China since 1949. Among drugs used 5 Fluorouracil was the first drug of choice because of its high efficacy and less toxicity. Moreover, it could be given through varieties of routes, such as oral, intravenous, and intra arterial injections. It could also be given as infusion, or through intracavitary instillation[4]. When 5 Fluorouracil is used in combination with other drugs, the daily dose might be reduced.

Other drugs used included 6- mecaptopurine, Knigohengmycin (a new antibiotic derived from a strain of streptomycetes, chemically similar but not identical to actinomycin D). Methotrexate was chosen in this patient as it is relatively cheap readily available and has shown good response in most of our patients.

Six courses of methotrexate were given in this patient, with injections of folinic acid given in alternate days to prevent side effects. This was followed by good response evidenced by progressive fall in levels of βhCG, disappearance of symptoms, and minimal toxicity. Since histological study provide only some basis of prediction of a benign or malignant course with no absolute correlation, chemotherapy in this patient was justified. This situation was further complicated by failure of other diagnostic methods such as failure of estimation of the exact levels of βhCG above 675μmol/L which could enable to distinguish invasive mole from choriocarcinoma.

There are other more complex combinations for treating these conditions[5]. These have been associated with good results but with more serious toxic effects including leukaemia, congenital anomalies in the subsequent pregnancies, and severe bone marrow suppression with superimposed infective morbidity[3,5]. Their use should therefore be confined to the indicated patients especially in the drug resistant patients, and the high risk group of patients and not justified in this patient[6]. With no evidence of resistant pulmonary metastases, and brain metastases, further surgical interventions such as thoracotomy, craniotomy and total brain irradiation were not indicated in this patient.

Gestational trophoblastic tumours although rare, they are potentially malignant. However they are curable. The best results in gestational trophoblastic tumour can only be obtained by referral to special centres so that accurate diagnosis, the extent of the disease, and the institution of appropriate management can be achieved.

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G4: PELVIC ABSCESS: MANAGED BY LAPAROTOMY AND ANTIBIOTICS.

Name : Miss S.M.

Age : 21 years

Reg. No: 952764

Residential address: Ukonga- Dar es Salaam

Date of admission : 14.3.1999

Date of discharge : 28.3.99

SUMMARY

Miss S.M. was admitted to our gynaecological ward as a referral patient from a peripheral dispensary. She presented with history of progressive abdominal swelling and abdominal pain, which was throbbing in nature accompanied with fever and foul smelling vaginal discharge for one week. These symptoms were preceded by a history of an incomplete abortion, which was followed by an evacuation of the uterus at a peripheral dispensary five days before onset of this problem. Clinically she was ill looking, febrile with a tender suprapubic cystic mass. Pelvic examination revealed foul smelling vaginal discharge with a cystic pelvic mass. The pouch of Douglas was not bulging.

A diagnosis of pelvic abscess was reached and laparotomy was done and 500mls of foul smelling pus was drained. The patient was put on antibiotics pre and post operatively. She had a relatively slow recovery but lastly was discharged home in good condition.

The case is presented with commentary on post abortal care protocol and various treatment modalities for pelvic abscess.

History of presenting illness

Miss S.M. presented to this hospital with a one week history of fever and abdominal pain which was throbbing in nature. The pain was progressively worsening. This was accompanied with progressive suprapubic abdominal distension. She also had a purulent foul smelling vaginal discharge, which was brownish in colour. Prior to the onset of these symptoms, the patient had an evacuation of an incomplete abortion at a peripheral dispensary. She denied history of intervention with the pregnancy. She also gave history of dysuria and frequency with no haematuria. She had no history of altered bowel habits. She had no palpitations, no dizziness or fainting attacks.

Gynaecological history

She had her menarche at 17 years with regular cycles of 30 days with painless periods lasting for 4 – 5 days of normal flow. She had never been on any modern method of contraception.

Obstetric history

Miss S.M. was para 3 + 1 with one living child. The first delivery was a full term normal delivery and the child was alive and well. The second delivery was a full term normal delivery and had a paediatric death at 4 months due to a febrile illness. The third pregnancy was also a full term normal delivery but ended up in a neonatal death at 1 month of age, also due to a febrile illness. In all her deliveries there was no antenatal, intrapartum or puerperal complication. The 4th pregnancy ended up with abortion at 8 weeks.

Past medical history

This was her first hospitalization and therefore her past medical history was not remarkable.

Family and social history

Miss S.M. was a peasant, who was married to a fellow peasant who fathered all the pregnancies. She did not take alcohol neither did she smoke cigarettes. There was no known history of diabetes mellitus or hypertension in the family

General physical examination

She was ill looking, febrile (temp 39^{0}C) moderately pale. She was not jaundiced, not cyanotic and had no oral thrush. There were no palpably enlarged peripheral lymphnodes.

Respiratory system

The respiratory rate was 18 breaths/min. There was no obvious respiratory problem. The breath sounds were heard and were normal vesicular.

Breasts

They were normal pendulous with normal areolar and nipples. There was no palpable breast lump and no abnormal nipple discharge.

Cardiovascular system

The Pulse rate was 100 beats/min, regular and of good volume and character. The blood pressure was 110/70mmHg in supine position. The heart sounds were heard normally and there were no added sounds.

Abdomen

There was obvious suprapubic distension to the level of umbilicus. There were no therapeutic marks. There was severe tenderness on the hypogastrium with guarding and rebound tenderness. There was a smooth cystic mass equivalent to a 20 weeks gravid uterus with limited mobility. The mass was extending to the pelvis. The liver, spleen and kidneys were not palpably enlarged. There was no free peritoneal fluid. The bowel sounds were heard normally.

Pelvic examination

The vulva was normal with foul smelling discharge, which was brownish in colour. Speculum examination revealed pooling of foul smelling discharge. The vagina mucosa was normal. The cervix was healthy and normal with parous external os, where the discharge was trickling from. The culde sac was not bulging. An endocervical swab for culture and sensitivity was taken at this moment. Digital examination confirmed a pelvic mass, which could not be separated from the uterus It was not possible to appreciate any of the other pelvic structures due to severe tenderness.

Rectal examination

The anal sphincter and rectal mucosa were normal. There was a cystic mass felt anteriorly which was tender and fluctuant. The examining finger was stained with normal foecal matter.

Provisional diagnosis

Pelvic abscess secondary to incomplete septic abortion.

Investigations and results

1. Endocervical swab for culture and sensitivity revealed no organisims.
2. Midstream urine for culture and sensitivity revealed significant growth of Klebsiela species which were sensitive to Nalidixic acid and Gentamycin.
3. A pelvic ultrasound was done and it revealed a huge pelvic inflammatory cystic mass measuring 6.8 x 13.7 cm posterior to the uterus. The uterus was found to be of normal size and echodensity.
4. Urgent haemoglobin was done and was found to be 9.6 g/dl.

Definitive diagnosis

Pelvic abscess secondary to incomplete septic abortion.

Management

- An intravenous line was established with an 18 gauge cannula.

  The patient was, put on combination antibiotic as follows:
- Injection x-pen 5 mu I.V. stat then 6 hourly for forty-eight hours.
- Injection Gentamicin 80mg I.V. start then 12 hourly for 1 week.
- Intravenous metronidazole 500mg 8 hourly for forty eight hours.
- Blood grouping and cross-matching was done and 1000 mls of blood requested and reserved.
- The patient was fasted soon after confirming the diagnosis and the plan for laparotomy and drainage was made.

Anaesthesia

The patient was induced by preoxygenation, Atropine injection 1mg intravenously, freshly prepared sodium thiopentone 250mg, suxamethoneum 100gm intravenously and was intubated with a cuffed endotracheal tube size 7.Maintenance of surgical anaesthesia was achieved by oxygen 6 litres per minute, inhalation holothane 0.5 %, injection Pancuronium 4mg and injection Pethidine 75mg.

Surgical procedure

The patient was catheterized aseptically and a two way Foley's catheter was left insitu throughout the procedure.The surgical team scrubbed and dressed with sterile gowns. With the patient in supine position the abdomen was cleaned with weak iodine twice and then dried with a dry piece of gauze on a holder. The patient was then draped with sterile linen with the exception of the incision site.

The abdomen was then opened through a left paramedian incision, while clamping the bleeders and ligating them with catgut No.2/0 suture to minimize blood loss. The subcutaneous fat was cut with a scalpel up to the fascia. This was opened by a scalpel and then clamped with long artery forceps on each side. Using a strong Mayo scissors the rectus sheath was carefully separated from the underlying rectus abdominis muscles, and then extened proximally. The same procedure was done to extend the incision distally. The rectus abdominis muscles were carefully separated from the medial aspect and retracted laterally to expose the posterior layer of rectus sheath (proximally) and the tranvesalis fascia (distally). These were again held with two long artery forceps, care being taken not to clamp the bowels and then the peritoneum was opened. The clamps were then shifted to hold the peritoneal margins and then the peritoneum opening extended proximally by Mayo pair scissors with index and middle fingers of the other had guiding to avoid injury of the viscera. The same technique was used to extend the opening distally this time with care not to go further distally to avoid injury of the urinary bladder. The disappearance of the transparence in a well exposed peritoneum marks the beginning of the urinary bladder.

Findings

There was a cystic mass, which was capsulated measuring about 14 cm by 7cm in diameter, which was fixed in the pouch of Douglas. There was a normal sized uterus and both fallopian tubes and ovaries were found to be inflamed. The omentum was adherent to the cyst capsule.

What was done

The omentum was separated from the mass and the bleeding sites clamped with small artery forceps and transfixed with catgut suture No. 1. The bowels were inspected and were found to be normal. After it was made sure that it was an abscess, the bowels were packed and separated from the abscess. The capsule was then opened and a suction tube inserted inside the capsule so as to minimize spillage of pus to other parts of the peritoneal cavity. The abscess was then explored with an index finger carefully to open the locules and ensure adequate drainage of the pus. Intraoperative pus swab was taken for aerobic culture. Specimen for anaerobic culture could not be processed. Pelvic lavage was done repeatedly with warm normal saline, care being taken not to spill infected material to other areas. Abdomen was mopped and haemostasis was ensured. A corrugated rubber drain was left in the pouch of Douglas, and was left to drain through the anterior abdominal wall. Swabs and instruments were counted and were pronounced to be correct. The abdomen was closed in layers using catgut no 2/0 to peritoneum, vicryil No. 1 to rectus sheath and silk number 2/0 to the skin

Estimated blood loss was 500mls.

Reversal of anaesthesia

The patient was reversed with intravenous neostigmine 2.5mg, injection Atropine 1mg, oxygenation and suction. She was then extubated when spontaneous respiration was established. In recovery room she was found to be in stable condition, the pulse rate was 80 beats per minute. Her blood pressure was 100/50mmHg and a respiratory rate of 20 per minute. When she was fully awake, she was discharged to a gynaecological ward.

Postoperative orders

She was prescribed intramuscular injection of Pethidine 100mg 8 hourly for 24 hours. Intravenous fluids Ringers lactate 3Litres per 24 hours. In put and output had to be monitored and the vital signs had to be monitored hourly for six hours and then four hourly. She was also prescribed to continue with antibiotics, which she started preoperatively.

Postoperative recovery

24 hours post operatively the temperature went down to normal. The input in the first 24 hours was 2700mls and urine output was 700mls. Since the patient was clinically pale she was given 500 mls of cross-matched Blood group O Rhesus (D) positive and then was kept on haematinics and antibiotics. On the third postoperative day the drainage site was dry so the drain was removed. On the fourth post operative day the patient developed fever again and a blood slide for malaria parasite was taken and was found to be positive. She was put on intramuscular chloroquine injections 200mg 8 hourly for the first 24 hours and then she finished with chloroquine tablets 600mg next day and 300mg the day after. After the initial 48hours of injectable antibiotics, she was switched on to oral antibiotics (Ampicillin and Metronidazole) but she continued with Gentamycin injection up to the 5th postoperative day.

On the fifth postoperative day she was found to have a mild wound sepsis. A pus swab was taken and revealed Klebsiela species, which were sensitive to Gentamycin. On the 6th post operative day alternate stitches were removed and the wound was cleaned with methylated spirit once daily and dressed with sterile gauze. The treatment with Gentamycin was extended for another 2 days.

On 8th day the patient was in good general condition all the stitches were removed and the wound was dry. She was discharged in good condition.

Follow up

Four weeks post operative the patient was seen at the gynaecological clinic, the wound had healed well, she looked healthy, the Haemoglobin was found to be 10 g/dl and was counseled about family planning and discharged from the clinic.

COMMENTARY

A pelvic abscess is commonly an end stage in the progression of genital tract infection and is frequently an uncalled for complication. It occurs commonly following neglected sexually transmitted infections. However it can also follow inadequate post abortal care, as a complication of IUCD insertion, elective abortion or any other procedures in the pelvis.

Complications following abortion are among the most frequent gynaecological emergencies and sometimes life threatening. Miss S.M. had a first trimester abortion followed by evacuation of her uterus at a peripheral dispensary. Infection in this patient might be due to retained products of conception, and therefore measures that reduce the incidence of incomplete evacuation are likely to reduce the rate of infections[2].

Evacuation and curettage with metallic instruments is the more widely method of evacuation used in peripheral centers where this patient's uterus was evacuated. But curettage with lack or inadequate analgesia as what happens in peripheral centres is hazardous and the chance of ending up with an incomplete evacuation is high. Perhaps it is high time that manual vacuum aspiration (MVA) kits be introduced especially at primary health care level[3].

Proper counseling of the patient on the nature of the problem and the complication which are likely to occur following an abortion is an important aspect of management of post abortal patients.

Counseling and enforcing necessary information for infection prevention (including HIV) during and post evacuation is another important aspect of post abortal care. Advising the patient to return in case of any complication will help to prevent life threatening complications and permanent damage. Avoidance of douching, application of foreign bodies in the vagina and early (post-abortal) sexual intercourse make an important aspect of management. Rarely these factors are stressed especially in the primary level of care where this patient was attended first. Counseling for family planning is another important aspect in such patients in order to avoid unwanted pregnancies or early post-abortal conception.

Although post-abortal sepsis can occur spontaneously, in most of them it follows invasive procedures in the genital tract. Other sources of infection include respiratory system of attendants, hands of attendants, patients own hands, atmospheric dust, bed lines, dressings, and direct contact from other individuals.

Aseptic technique during handling of post-abortal patient and adherence to sterile technique during uterine evacuation is mandatory to prevent complications like this. More serious complications like toxic shock may also follow. This patient had a relatively localised infection. With proper infection prevention, late complications such as tubal blockage, infertility and chronic pelvic pain should be avoided. Intensive medical management with broad

spectrum antibiotic before and after evacuation of the uterus would certainly prevent occurrence of these problems[4].

Management of a pelvic abscess is primarily drainage. However the route of drainage of the abscess differs from patient to patient depending on the presentation. Laparotomy and drainage of the abscess was performed in this patient. Colpotomy is advocated by many gynaecologists as it is simple with less morbidity and complications[5]. This procedure was particularly avoided in this patient, as the pouch of Douglas was not bulging despite positive culdoscentesis. With a pouch of Douglas that is not bulging, the risk of injury to the viscera is high. The abdominal approach had an additional advantage of ensuring adequate exploration and breakage locules in a big abscess like this, which might not be possible at colpotomy. Peritoneal lavage with warm saline during laparotomy is another added advantage to laparatomy as compared to colpotomy. Using povidone iodine instead of warm saline for peritoneal lavage, has been advocated by some gynaecologists, with better results.

Per-cutaneous abscess drainage under ultrasonic guide is another method that has gained wide acceptance as an adjustment in the management of pelvic abscesses. It involves minimal trauma, is well tolerated and produces early relief of symptoms[6]. In many instances it may shorten the length of hospital stay, reduce cost, and often eliminate the need for more extensive surgical intervention. Parenteral broad antibiotic coverage perioperatively and then change according to sensitivity pattern after the culture results is also important. Corrugated rubber drain are advocated by many surgeons to ensure continuous drainage of pus postoperatively and avoid recollection. However it is also said to create aerobic environment in the peritoneal cavity, which

subsequently discourage growth and proliferation of obligate anaerobic organisms and hence facilitate recovery.

In conclusion, pelvic abscesses are still common postabortal complications in areas of low resources. With better understanding and implementation of quality postabortal care and with the advent of improved diagnostic and therapeutic modalities for early genital tract infection, pelvic abscess and its sequelae will eventually become a rarity in gynaecology practice.

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Dermoid Cyst

G5: BILATERAL MATURE CYSTIC TERATOMA IN AN ADOLESCENT GIRL: LAPAROTOMY, LEFT OOPHORECTOMY AND RIGHT OVARIAN CYSTECTOMY.

Name: Miss V.W.

Age: 16 Years

Registration: 942293

Residential address: Mbagala-Dar-es-Salaam.

Date of admission: 13.12.98

Date of discharge: 20.12.98

SUMMARY

Miss V.W. was a 16 years old secondary school student. She was referred to our out patient gynaecological clinic from a peripheral health facility with a history of a painless suprapubic swelling which had started three months before. The swelling was accompanied with low abdominal discomfort, without any disturbance of her menstruation. Clinical examination reveled a suprapubic mass, which was firm and freely mobile equivalent to a 20 weeks gravid uterus. The mass was arising from the pelvis. Pelvic examination revealed the mass to be arising from the left adnexum. An ovarian tumour was provisionally diagnosed. Laparotomy revealed bilateral mature cystic teratomas with intact capsule and no ascitis. Total left oophorectomy and right ovarian cystectomy with conservation of ovarian tissue was done. Histology of both specimens revealed mature cystic teratoma. She had un eventful recovery. The case is presented with a commentary on the natural history of cystic teratoma and its management in an adolescent girl.

History of presenting illness

Miss V.W, a form two secondary student. She was referred to our gynaecological outpatient clinic from a peripheral hospital after being expelled from the school for being suspected to be pregnant. That decision was made on the basis of progressive abdominal swelling, which was noted about three months before while at school. The swelling was painless but it was accompanied with mild low abdominal discomfort. Her appetite was good, and had no change in her bowel habits. She had no symptoms suggestive of pregnancy, and there was no history of passage of melaena or bloody stools. She had no cough or shortness of breath and had no history of jaundice, deepening of voice or abnormal hair distribution. There was no history of weight loss.

She had regular menstrual cycles with normal menstrual blood loss. She did not have any fever, painful micturition, frequency or fainting attacks.

There was no intolerance to heat or cold. This was the first time she had sought medical consultation since this problem started.

Gynaecological and menstrual history

She attained her menarche at the age of 14 years with regular cycles every 28-30 days and period lasting for 4-5 days with normal flow, which was accompanied with mild discomfort of which she did not require medication. Her last menstrual period was two weeks before her presentation and it was normal. She had no vaginal discharge and had no painful coitus.

Obstetric history

She was nuliparous.

Past medical history

It was unremarkable.

Social and family history

She was the first born in a family of six children. She was living with her parents. She was a form two student. There was no family history suggestive of diabetes mellitus or hypertension, and had no close tuberculosis contact. She admitted to be sexually active.

General physical examination

She was a healthy looking young girl with no evidence of wasting. She was afebrile, not pale not dyspnoic, and not jaundiced. She had no oedema of lower limbs. There was no thyroid gland enlargement and there were no palpably enlarged peripheral lymph nodes. The Vichow's nodes were not palpably enlarged.

Respiratory system

She had normal spontaneous respiration with bilaterally symmetrical chest expansion. There was normal tactile vocal fremitus. Percusion note and vocal resonance were normal and breath sounds were normal vesicular bilaterally with no added sounds.

Breasts

She had normal and well developed breasts with no palpable breast lumps.

Cardiovascular system

The pulse rate was 72/min regular and of good volume. The blood pressure was 110/70 mmHg. The apex beat was palpable at 5th intercostal space mid clavicular line. The heart sounds were heard normally with no added sounds.

The abdomen

The abdomen was moving with respiration. There was an obvious suprapubic distension. No superficial distended veins were seen.

There was no area of tenderness, but there was a firm mass, which had smooth margins and freely mobile equivalent to a 20 weeks gravid uterus. The liver kidneys and spleen were not palpably enlarged and both renal angles were free of tenderness. There was no shifting dullness and no fluid thrill and bowel sounds were normal.

Vaginal examination

- The vulva and vagina was normal. There were normal feminine hair distribution and no clitomegaly.
- Speculum examination revealed a healthy cervix with a nulliparous external os. The vaginal skin was found to be healthy.
- Bimanual examination revealed a closed cervix. It was difficult to feel the uterus separately due to the suprapubic mass described. The mass was confirmed to arise from the left adnexum and the right adnexum was found to be free.

Rectal examination

The rectal mucosa was found to be normal. There was a mass felt in the pouch of Douglas, which was firm, moving with the abdominal mass described. The examining finger was stained with normal foecal matter.

Provisional diagnosis

Ovarian tumour.

The patient and her mother were counseled about the problem and instructed to under take a number of laboratory investigations.

Investigations and results

1.Full blood count

Haemoglobin 12.2 g/dl

White blood cells total 8000/dl

Differential Neutrophils 45%

Lymphocytes 52%

Oesinophils 2%

Basophils 1%

2. Stool analysis revealed a normal soft brownish stool with no abnormality.
3. Serum creatinine was 72 µmol/L
4. Urinalysis was normal (No leucocytes, casts or epithelial cells)
5. Serum T3 and T4 levels were within Normal ranges.
6. Liver function Tests were within normal ranges.
7. Plain abdominal X-ray showed multiple calcific areas seen in the pelvic cavity.
8. Chest X-ray showed normal film with no canon balls, no pleural effusion or any opacification.
9. Abdominal ultrasound showed an echocomplex mass with cystic and solid components and areas of calcification arising from the left adnexa measuring 14.8 x 12.8 cm. There was another small cystic lesion on the right adnexa approximately 3 x 5 cm. Normal non gravid uterus was seen. The liver, both kidneys and the spleen were normal. There were no para aortic nodes seen.

Definitive diagnosis

Bilateral cystic ovarian tumours, highly suggestive of mature cystic teratoma.

Plan of management

The patient and her parents were counseled about the problem and its management and they accepted. Laparotomy was decided upon.

1. The patient signed an informed consent for both anaesthesia and surgery after being counseled.
2. Blood was grouped and crossmatched and 1000 mls of of compatible blood group O Rh (D) positive was made available and reserved.
3. She was fasted from midnight of the day of operation
5 The abdomen was cleaned with soap and shaved.

Anaesthesia

This was given as described in gynaecological case No. 1.

Surgical details

The abdomen was cleaned with weak iodine solution twice and then dried with dry swabs on a holder. She was then draped with sterile linen. Through a left paramedian incision, the abdomen was opened as described in gynaecological cse No 4.The incision was then extended proximally and distally using a Mayo pair of scissors. A self-retaining retractor was applied and abdomen inspected.

Findings

There was a left ovarian cystic tumour measuring about 13 x 15 cm with mixed consistence. The capsule was intact and smooth. There was no ascitis and no adhesions. The parietal and visceral peritonea were found to be normal. There was a small cystic mass on the right ovary measuring 3cm x 6cm.There were no malignant seedlings in the pouch of Douglas. The omentum was

normal with no deposits. There were no para aortic lymph nodes enlargement and the liver spleen kidneys and the diaphragm were all normal. Both fallopian tubes were normal

What was done

The bowels were packed away from yhe surgical field using two tagged abdominal packs. Attempt to do left cystectomy so as to conserve some ovarian tissues was made but was not successful and therefore to avoid the risk of accidental rupture of the capsule intraoperatively and subsequent spillage of tumour materials in the peritonealcavity, total left oophorectomy was performed sparing the fallopian tube. The left ovarian pedicle was therefore doubly clamped using strong curved Kocher's forceps and resected between clamps. The stumps were then doubly transfixed with catgut No. 2. The tumour was removed in total with no spillage of its contents into the peritoneal cavity.

A small elliptic incision was then made on the right ovarian cortex and a plane of cleavage between the ovarian cyst and the ovarian cortex was identified. Carefully the cyst was dissected by using McKindoe pair of scissors so as to enucleate it conserving some ovarian tissues. The cyst was shelled out with no spillage of the contents in the peritoneal cavity. A running suture was placed on the margins of the ovarian tissue with catgut No.2/0 and haemostasis was achieved.

The abdomen was moped, haemostasis ensured, swabs and instruments counted and pronounced correct, then abdomen closed in layers. Continuous stitching with Vicryl No. 1 to the rectus sheath and interrupted stitches of silk No. 2/0 to skin.

Both tumours were dissected and they were both suggestive of mature cystic teratomas. The right tumour had sebaceous materials, hairs and some bone materials where as the left tumour had multiple locules with serous fluid and sebaceous materials and teratomatous tissues similar to those on the right. There were no areas of necrosis. Multiple samples were taken for histology from both ovarian capsules. Estimated blood loss was 200 mls.

Reversal of anaesthesia

This was done as described in gynaecological case No.1.

The patient had uneventful recovery from anaesthesia and was transferred to the gynaecological ward when fully awake and with stable vital signs.

Postoperative orders

1. Pulse rate, blood pressure, respiratory rate were to be checked hourly for 6 hours then 4 hourly for 24 hrs.
2. Dextrose saline 3L to run for 24 hours.
3. Intramuscular injection of Pethidine 100mg 8 hourly for 24 hours.
4. Input and output had to be monitored and charted

Postoperative recovery

The patient was reviewed 6 hours postoperative and was found to be in stable condition. She was fully awake, not pale not febrile and her blood pressure was 110/70 Hg. Pulse rate 80/mm regular with normal volume. The abdomen was soft and not distended. She had received 800mls of fluid and there were 600mls of clear urine in the urine bag.

She had a smooth recovery on subsequent days in the ward. On the third day, her haemoglobin was checked and wad found to be 11.4g/dl. On the 6th day

the stitches were removed and she was discharged home. She was instructed to attend a follow up clinic after 6 weeks.

Follow up

She was found to be healthy with good general condition. She had just finished her menses. She had normal vital signs and her surgical wound had healed by primary intention. Pelvic examination revealed no pelvic abnormality. Her haemglobin was 12.6 g/dl. Histology results confirmed Mature cystic teratoma on both sides. She and her parents were assured and were asked to continue with follow up 6 monthly.

COMMENTARY

Benign mature cystic teratomas are the commonest benign cystic tumours of the ovary. They account for 25% of all ovarian neoplasms and approximately 95% of all ovarian teratomas. They occur commonly in young ladies in their reproductive ages, and the peak age is about 19 years. It is also referred to as a dermoid cyst due to predominance to ectodermal layers together with their derivatives such as hairs, sweat glands, sebaceous glands and bones as it was found in this patient [1,2 4] However other tissues such as bronchi, thyroid, brain, cartilage intestines and carcinoid cells may also be encountered.[2,4.]

Well differentiated forms of adult tissues differentiate the benign cystic teratoma with a malignant one. The primary malignant tumour is predominantly composed of immature, or embryonal tissues. The benign tumour is rarely larger than 20cm. It is smooth walled and in 15-20% the tumour is bilateral as it was found in this patient[1,3.]

The importance of this tumour lies in its frequency and the possible complications, which are likely to occur. These include Torsion, chronic

granulomatous peritonitis from a slow leaking cyst and acute chemical peritonitis, which is a result of irritating nature of the cyst contents in the peritoneal cavity in a ruptured cyst. Rarely the contents may perforate adjacent viscera such as the bladder and the rectum and lead to passage of contents per rectum[3].

Malignant transformations of benign cystic teratoma occur in 1-2%[3]. Although this occurs commonly in the minority of patient who present with this condition after menopause, young patients like this are not completely immune. In the early stage of malignant change the clinical presentation is similar to that of a benign mature cystic teratoma except that in malignant condition, ascitis is usually present. An alert mind in the possibility of malignant change in such patients should be there to guide the attending physician. This is the importance of multiple sampling of tissues for histology. It is recognised that the terms benign and malignant are not truly applicable to teratomas for the prognosis of any individual tumours is determined not by the usual criteria of malignancy, but by the degree of maturity of constituent tissues[4]. Studies have also shown that one or more than one component of the teratoma may undergo malignant change but 80% of them are squamous cell carcinoma. Other malignancies are carcinoid tumours, adenocarcinoma including struma ovarii. Bronchogenic carcinoma, leiyomyosarcoma, osteosarcoma, chondrosarcoma, basal sell carcinoma, melanoma, and sebaceous tumours have also been reported[3]. Proper and regular follow up in patients who had benign cystic teratoma will enable early detection of those who are likely to undergo malignant changes.

Monodermal highly specialized teratomas also do occur and the commonest are struma ovarii where thyroid tissue represent more than 50% of the tumour. Others are carcinoid tumours and strumal- carcinoid which is a combination of the two. Malignant change can occur in such tissues and present with metastases with normal appearing thyroid gland.

Surgical management of benign cystic teratoma in young girls like this poses a challenge to the gynaecologists. The challenge is compounded when dealing with bilateral tumours as to what was found in this patient.

Future fertility consideration is important in such patients and therefore bilateral cystectomy with conservation of ovarian tissues on both sides would be ideal. However this was technically difficult necessitating oophorectomy on one side and cystectomy on the second side.

With much similarity in the gross appearance of the tumour undergoing malignant change, malignancy may not be excluded intraoperatively and therefore extra care must be employed to avoid spillage of tumour materials into the peritoneal cavity. Having a frozen biopsy could minimise the anxiety of the surgeon intraoperatively. However this could not be done due to technical problems. When only one ovary is involved, a biopsy of the contra lateral ovary is advocated by some gynaecologists.This is done considering the frequency of bilateral occurrence of the tumour and particularly for follow up reasons. But this may not be justifiable in a clinically normal appearing ovary[1]

Occurrence of mature cystic teratoma with other germ cell tumours such as dysgerminomas which is not uncommon, pose another challenge. This combination however was not encountered in this patient.

In a patient whom oophorectomy has been done on one side like the patient presented, close and regular follow up is mandated as early detection of any pathology in the remaining ovary is important so that salvage of ovarian tissue can be made in case of surgical intervention Late presentation may necessitate ophorectomy and its consequences.

In rare circumstances in which both ovaries must be removed, some gynaecologists recommend the uterus to be left in place for the possibility of invitro fertilization if the patient has a childbearing expectation. But this is a challenge in our set up as invitro fertilization is not readily available and is very expensive for an ordinary person. It also necessitates hormonal replacement therapy, which is also expensive. Therefore efforts to preserve reproductive capacity and conservation of ovarian tissues should be the primary goal of the surgeons in such situations.

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G6: SEXUAL ASSAULT IN ADOLESCENT GIRL

ITS IMPACT AND THE ROLE OF THE ATTENDING PHYSICIAN:

Name: Miss M.K

Age: 16 years

Reg: No 915943

Residential address: Manzese –Dar es Salaam

Date admission: 5.5.98

Date of discharge: 6.5.98.

SUMMARY

Miss M.K was 16 years old primary school girl who was admitted to our gynaecological ward after being sexually assaulted by 2 unknown people who were assisted by about four other people to control the victim. Physical examination revealed a depressed young girl with scratch marks on the neck and the trunk. She had dust on her hair and extremities. Pelvic examination revealed a normal vulva with whitish discharge. The pubic hairs were matted. There were superficial bruises with fresh tear of hymen and minimal bleeding. Baseline investigations for medical legal purpose and follow up was done accordingly. The case is present with a commentary on the impact of sexual assault in an adolescent girls and the role the attending physician in its management.

History of presenting illness

Miss M.K was brought to hospital by her mother, being reffered from a peripheral health facility about ten hours after she had been sexually assaulted by two individuals who were unkwon, at about 11.00pm when she

was coming from a near by shop. She was attacked by a group of assailants about 6 in number and two of them forced her to have sexual intercourse while others holding her. During the process the assailants were threatening her not to make any noise. She neither lost consciousness but she noticed minimal genital bleeding. She denied anal penetration and she had never had coitus before. She reported the matter to the police, was given a police form No 3 and referred to a peripheral hospital before being brought to this center.

Gynaecological and menstrual history

She had her menarche at 15 years of age and had regular cycles of 28-30 days with normal periods of 3-4 days and normal flow. Her last normal menstrual period had started on 18th 4 and therefore she was in her mid-cycle. She had no history suggestive of pelvic inflammatory disease and was not in any form of contraception as she was not sexually active.

Past obstetic history

She was nulliparous.

Family and social history

She was a primary school pupil. She was living with her mother, who was divorced. She was the only living daughter of this mother and her father was not knows as she was born out of the wed locks. Her mother was selling fried fish as the only source of income. She was not drinking alcohol neither was she smoking cigarettes.

Past medical history

Unremarkable.

General physical examination

This was done in front of the attending nurse. She was ill looking patient depressed, afebrile with temperature of 37°C. There were scratch marks on the neck and the trunk. She was unkempt anxious and restless with self-blame. Her hairs and extremities were covered with dust. Her under pants were torn, wet with minimal blood stain. She had no smell of alcohol and had no features suggestive of intoxication.

Breasts

They were normal with no palpable lump.

Respiratory system

There was spontaneous respiration. The respiratory rate was 18/min with bilateral normal vesicular breath sounds.

Cardiovascular System:

The pulse rate was 80/min good volume and regular her blood pressure was 110/70mmhg. The first and second heart sounds were normal and there were no added sounds.

Pelvic examination

There was matting of the pubic hairs with minimal bleeding from the freshly torn hymen. The introitus was also having bruises at 5 o'clock with no active bleeding. The perianal skin was normal. A small Cusco's speculum was inserted and the vaginal walls and the cervix were normal. There was some mucoid whitish fluid in the posterior fornix. A specimen from this site was taken by aspiration and endocervical swab was also taken for culture and

sensitivity.Digital examination revealed a normal sized uterus and there was no adnexal mass.

Diagnosis

Sexual assault.

Management plan

1 Counseling.

2 Investigations.

3 Treatment including emergency contraception

4 Follow up.

Counseling

This was done both to the patient and her mother with emphasis on:

- .The possible chances of contracting sexually transmitted infections such as syphilis, chlamydia, Gonorrhoea and HIV.
- The need to take investigations so as to be treated and also for medical legal purpose.
- The chance of conception considering the act to have taken place at midcycle.
- Provision of psychological support, manly from her mother.

Investigations

1 Aspiration of posterior fornix fluid for spermatozoa.

2 Urine for baseline pregnancy test and culture and sensitivity.

3 Serum for VDRL and ELISA test for HIV so as to exclude pre existing infection.

4 Endocervical swab for culture and sensitivity.

Treatment

1 Two tablets of microgynon as a stat dose followed by another two tablets 12 hours later. This was given while the patient was still in the ward.

2 Erythromcyin 500mg 8hourly for five days.

3 Cotrimoxazole 1920mg 12hourly for two days.

4 Paracetamol 1g 8hourly for two days.

5 Sitz bath with savlon solution three times a day for two days.

On the evening of the day of her admission she was reviewed and there was no additional information. She looked more stable. She was discharged on the prescribed treatment and was given an appointment at Gynaecological clinic two weeks latter for results and re-evaluation.

Follow up after two weeks

The patient was seen two weeks latter at the clinic the results for VDRL, ELSA test for HIV and pregnancy test were all negative. Urine had no pathogens. Specimen taken from the posterior fornix, confirmed presence of spermatozoa. Psychologically she looked more calm and oriented. Abdominal pelvic examination revered no abnormality. She was allowed home and was given another appointment with repeat VDRL pregnancy test and ELISA test for HIV being performed a week prior to her visit.

Review after eight weeks

The VDRL, ELISA test for HIV and pregnancy test were all negative and she had resumed her normal regular menses. Abdominal pelvic examination

revealed no abnormality. She was discharged from the clinic after filling her police form No3.

COMMENTARY

Forcible carnal knowledge of a female against her will whether as sexual assault or attempt to commit sexual contact by force or threat of force constitute rape[1]. Throughout the World rape is commonly a problem of large metropolitan cities, especially in the developed world. Although there are no locally available data, observation has shown that the problem is at the increase even in developing World possibly due to increased urbanisation.

The true incidence of this problem is not known in this country as in other countries due to low reporting of the cases. But at this center there is an average of one case per day[2]. The true rate however is estimated to be 3-10 time more[3]. This low rate of reporting of victims is thought to be due to multiple social and cultural reasons[4]. Despite this low rate of reporting it is irrefutable fact that rape results a number of sufferings physically, socially and psychologically, and when the act is performed to an adolescent girl like in the presented patient, it also causes severe psychological trauma to other members of the family as well.

The direct effects of rape victims, include the direct trauma encountered when the assailant(s) attempt(s) to control the victim while the victim is trying to fight back. This although increases the risk of injuries when the victim is defeated, it also increases the chance of the victim espcaping the completion of the act. The sense of loss of control experienced by the victim, leaves severe

and occasionally long lasting residual psychological trauma to the victim, especially when the victim has no sexual experience as the presented patient.

Acquisition of infections such as gonorrhroea, syphylis, trichomoniasis, herpes, and non-gonoccocal urethritis is also possible during such acts. Of more importance is HIV infection since this is not curable. With lack of protection, which is usually the case, accompanied with trauma to the genitalia the risk of HIV infection is enhanced, and having raped by two people the exposure risk is doubled. Long term complications such as pelvic inflammatory diseases, infertility, chronic pelvic pain and ectopic pregnancies are likely in future.

Unwanted pregnancies with their psychological and social impacts are also a possibility. This patient was raped in mid-cycle and therefore this could be possible if emergency contraception was not provided. The risk of pregnancy in a single act of unprotected coitus during anytime of the cycle is 0-26% but when it occurs in the mid cycle the reported risk range form 7-30%[5].

Emotional and psychic up set such as guilty feeling and depression are among the psychological trauma demonstrated by the presented patient. Extremes of such effects include suicidal ideations or even true suicide. This aspect of trauma should never be neglected by the attending physician as it has more serious as well as long lasting consequences, which hamper the entire sexual and social life of the victim.

The attending physician has a central role as the immediate attendant of the victim as well the provider of evidence for medical legal proceedings.

Sympathy and empathy is emphasised throughout consultation. Careful history taking and thorough physical examination accompanied with constant reassurance have a psychotherapeutic effect. The past coital history and use on non-use of contraception and the last menstrual period is important for management plans. Details of injuries in the perineum and else where should be stressed both for the purpose of treatment and also as evidence in medical legal proceedings.

Provision of emergency contraception should be considered. However this is a touchy ethical and moral issue with a wide range of views. However if it is required and is within legal framework like in this patient, it should be provided. Different forms are available such as combined pills, or progesterone only pills taken within 72 hours, IUCD insertion within five days of the act and RU 486 which is antiprogesterone which is taken during the first five weeks[6].

Having unprotected coitus also expose the victim to the acquisition of sexually transmitted infections and therefore antibiotics (high dose contrimoxazole and erythromycin) were prescribed. Treatment of sypllihils is indicated when VDRL results are positive. Post exposure prophylaxis against HIV could be justifiable if the assailant(s) is known HIV positive. When this choice is made, the treatment should be initiated as soon as possible but not latter than 72 hours following the assault, and should continue for 28 days[7]. However this treatment should be provided in the context of a comprehensive treatment, and counseling program that recognises the physical and psychological trauma experienced by the victim. The availability and cost of these drugs is however another barrier in our set up.

Counseling is therefore one of the most important aspect of management of rape victims. This should be both to the parents and the victim before discharge and should continue during follow up.

To conclude, sexual assault is one of traumatic events physically, psychologically and socially. The victims well-being is a priority but also provision of evidence that will enable legal action to take its right course. Prevention of such acts is encouraged at community level. Collection of accurate information that can be used as reliable evidence, is the physician's contribution to the law and judiciary system towards prevention or eradication of this inhuman act.

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G7: PRE-INVASIVE CERVICAL SQUAMOUS INTRAEPITHELIAL LESION: COLD KNIFE CONE BIOPSY.

Name: M.K

Age: 31 Years

Reg No: 956838

Residential address: Sinza - Dar es Salaam

Date of admission: 8.7.99

Date of discharge: 15.7.99

SUMMARY

Mrs. M.K. was a 31 years old Para 3 + 0 with 3 living children. She presented to our gynaecological out patient clinic with history of irregular vaginal bleeding, which was intermittent without clots. She had no history of contact bleeding. An IUCD which was insitu, was removed two months before but the symptoms persisted. Physical examination revealed a hyperemic cervix with no obvious mass. A Pap smear was done and revealed a High grade Squamous Intraepithelial Lesion (HSIL). A cold knife cone biopsy was performed that showed large cells with hyperchromatic nucleus and scanty cytoplasm and pleomorhpism. There was no stromal invasion and the section margins were free of dysplasia. She was discharged home in good condition. The case is presented with a short commentary on the importance of cervical screening and various treatment modalities for pre invasive cervical lesions.

History of presenting illness

Mrs. M.K. was 31 years old para 3 + 0. She presented to our gynaecological out patient clinic with history of irregular vaginal bleeding which started insidiously and was progressively worsening. The bleeding was intermittent

but there was no passage of clots. She denied history of contact bleeding. She was not having symptoms of pregnancy and had no vaginal discharge. She had a copper T intrauterine contraceptive device, which she stayed with for 2 years and was removed 2 months prior to her presentation but the symptoms persisted. She had no dyspareunia. She had no cough and had no history of haematuria or bloody stool. She had no history of genital ulcers and no history of bleeding from the nose or gums. She had been on various antibiotics prescribed at peripheral health facilities with no improvement.

Gynaecological and menstrual history

Her menarche was at the age of 16 years and her first coitus was at 18 years. She used to have regular cycles every 30 days with painless periods lasting for 6 days with normal flow. After she had an IUCD insertion she presented with a short period irregularity of her menses with prolonged periods accompanied with mild abdominal discomfort, which subsided spontaneously. She resumed her normal menses until this problem started.

Obstetric history

She was para 3 with all 3 living children. All deliveries were term spontaneous vertex deliveries with no antenatal intrapartum or puerperal complications. Her first delivery was at the age of 21 and her last delivery was three years before her presentation.

Past medical history

Unremarkable.

Family and social history

She was a primary school teacher and was married to a businessman. She was not taking alcohol and was not smoking cigarettes.

General physical examination

She was a healthy looking young woman afebrile, not pale not jaundiced with good nutritional status. She had no oral thrush and no palpably enlarged peripheral lymphnodes.

Respiratory system

Respiratory rate was 16 breaths/min regular with bilateral chest expansion. Breath sounds were normal vesicular bilaterally with no added sounds.

Breasts

They were normal with no palpable lumps.

Cardiovascular system

The pulse rate was 80 beats/min with good volume, regular and of good character. Blood pressure was 130/80 mmHg. The first and second heart sounds were normal with no added sounds.

Abdomen

The abdomen was protuberant moving with respiration. There were no surgical or therapeutic marks. There was no area of tenderness. The liver spleen and both kidneys were not palpably enlarged. Renal angles were not tender; there was no shifting dullness and no fluid thrill. Bowel sounds were heard and they were normal.

Pelvic examination

The vulva and vagina were normal. Speculum examination revealed a hyperaemic cervix. There was no discharge and no bleeding. There was no obvious lesion on the cervix. A papsmear for cytology was taken and endocervical swab taken for culture and sensitivity. A digital examination revealed a normal sized uterus with no adnexa masses. There were no

parametrial thickening or nodularity. The examining finger was slightly stained with blood.

Provisional diagnosis

Squamous intraepithelial lesion SIL Is it high grade or low grade?

Differential diagnoses of ectropion, cervical granuloma, or early invasive carcinoma of cervix could not be excluded.

Plan of management

1. Investigations
2. Cold knife Cone biopsy

Investigations and results

1. Full blood count

   Haemoglobin 12 g/dl

   White blood cell count 4000/ml

   Neutrophils 70%

   Lymphocytes 24%

   Oesinophils 3%

   Monocytes 3%

   Platelet count 200,000/ml

2. Urinalysis revealed no abnormality
3. Mid stream urine for culture and sensitivity revealed no pathogens
4. Stool analysis - No abnormality detected.
5. Cervical Pap smear for cytology revealed dyskaryotic parabasal cells with increased nuclear cytoplasmic ratio, hyperchromasia with normal chromatin patterns against a background of polymorphonuclear

leucocytes. This was suggestive of a High grade Squamous Intraepithelial Lesion (HSIL).

6. Endocervical swab for culture and sensitivity revealed no pathogens.

The patient was therefore planned for a cold knife cone biopsy.

Preoperative preparations

1. The patient was counseled about the procedure and its importance.
2. She was fasted from the midnight of her day of the procedure.
3. Blood grouping and cross matching was done and 500 mls of blood reserved.

Anaesthesia

Anaesthesia was given as per gynaecological case No. 1

Procedure

The patient was placed in lithotomy position and the surgeon and his assistant scrubbed and put on sterile gowns and gloves. The perineum was cleaned with weak iodine and the vagina cleaned with savlon solution. The patient was draped in sterile linen. She was catheterized aseptically and 300 mls of clear urine obtained.

Examination and anaesthesia was performed and the findings described above were confirmed.

The cervix was exposed using two Sims speculums one retracting anterior vaginal wall and the other posterior vaginal wall. The two lateral lips of the cervix were held using tenaculum forceps. Haemostatic sutures were placed laterally on each side using No.1 chronic catgut sutures.

A circular incision was made on the ectocervix such that the whole hyperaemic area was within. The incision was extended proximally using a

scalpel so that a cone shaped tissue was removed including the whole circumference of the squamocolumnar junction. Four haemostatic sutures were placed at 12,3, 6 and 9 o'clock. Haemostasis was achieved. A dry sterile gauze was left in the vagina. A stitch was put at 12 O'clock on the biopsy specimen for identification.

Reversal of anaesthesia

This was achieved as described in gynaecological case No.1.

Postoperative orders

1. Observation and charting of pulse rate blood pressure and respiratory rate had to be done hourly for 6 hours and then 4 hourly.
2. Vaginal bleeding had to be observed.
3. Injection Diclofenac 75 mg was prescribed 6 hourly for 24 hours.
4. The vaginal gauze had to be removed after 6 hours.

Postoperative recovery

Six hours postoperative she was fully awake and well. She had no vaginal bleeding and the vital signs were stable. The vaginal pack was removed. She had a smooth postoperative recovery and on the 5th postoperative day she was discharged in good condition.

Follow up

She was seen 6 weeks postoperatively. Her condition was good and she had just finished her menses, which were normal. The results of her cone biopsy revealed a cone shaped cervical tissue with ecto and endocervix. There were large cells with hyperchromatic nucleus and scanty cytoplasm. Pleomorphism was also noted. The stroma had lymphocytic infiltration with

no invasion of dysplastic cells. The section margins were also free of dysplasia. She was advised to come back for a second follow-up six weeks later. A control Pap smear was taken and was normal. She was advised to do another pap smear after three months, and was advised to continue with follow up and Pap smears on three monthly intervals.

COMMENTARY

Squamous intraepithelial lesions are pre-malignant lesions of the cervix. They encompass a spectrum of abnormalities less severe than the invasive squamous cell carcinoma of the cervix. The Bethesda systems of nomenclature put them into two broad groups as opposed to the traditional CIN system. The pathogenesis of cervical cancer has been speculative over the years until recently when human papilloma virus especially type 16,18,45 and 56 in that older of frequency have been confirmed to be associated.

There is no doubt that regular routine screening and treatment of pre invasive lesions have significantly reduced the incidence of invasive cervical cancer in the developed world[1].

Invasive cancer of the cervix is still the most common cancer in women in the developing countries throughout the world[2]. Screening programs are rare or non-existing in many of these countries due to limited financial and human resources, but its importance remains. There is controversy regarding handling of women with low grade squamous intraepithelial lesions (LSIL), since only 15% of these patients progress to carcinoma insitu, whereas others may regress spontaneously. Some recommend a Pap smear six months latter and colposcopy when the smear remains abnormal[4], where as

others recommend immediate treatment. This is due to the fact that there is a high rate of default in this group, occurrence of invasive cancer in the untreated compared to the treated ones and occasional failure of the cytologist to pick high grade squamous intraepithelial lesions[3].

For high grade squamous intraepithelial lesions there is no controversy, treatment and follow up is indicated. Since the peak incidence of SIL is between 25-30 years, conservation of reproductive function in majority of these patients is important.

Various treatment modalities have been employed including laser therapy, cryosurgery, cold knife cone biopsy, electrocautery and diathermy and loop electrode excision procedure (LEEP). The treatment therefore involves either destruction or removal of the transformation zone and surrounding tissues. Colposcopy or colposcopic guided biopsy is advised before any of these procedures to exclude invasive lesions. This is particularly so when the destruction methods, or hysterectomy is contemplated[1]. However even with such advanced techniques there is 15 - 30% chance of under diagnosing. Colposcopy was not done in this patient due to lack of this facility at the center.

A cold knife cone biopsy was done in the presented patient as other treatment modalities are not available. However it is the opinion of the author that in an area of high prevalence of invasive carcinoma treatment by destruction should not be preferred as there may be a certain extent of invasion, which is overlooked. The failure rate and recurrence rate are also high in such procedures due to uncertainty of invasive conditions at the time of diagnosis or treatment.

Laser surgery using CO_2 has gained popularity as an office procedure over the other methods due to precise control of depth of vaporization, limited destruction of the rest of the cervix and precise control over the area to be treated. But it shares the limitation with Cryosurgery and electrocautery and diathermy due to inability to immediately detect the invasive lesions.

Cold knife cone biopsy and loop electrode excision share the advantage over other methods in that the tissues may be subjected to histological evaluation. Although studies have shown that cold knife and loop excision are comparable and equally effective diagnostic and therapeutic procedures for high grade SIL[5], the loop electrode excision procedure has an advantage over the cold knife cone biopsy in that it can be done on outpatient basis and is less haemorrhagic. However the cold knife cone biopsy is superior when a glandular lesion (atypical glandular lesion of undetermined significance) is suspected. It is also favoured when a Pap smear or colposcopic examination suggests a possibility of significant invasion. This is because the thermal artifacts on the margins of the specimens obtained from LEEP may obscure detection of significant invasion and leave the patient with sub-optimal treatment. Severe tissue damage have been reported to preclude evaluation in 34% of specimens obtained from LEEP [5].

With the era of HIV infection, studies have demonstrated earlier invasive carcinoma in the seropositive patients[6]. Establishment of invasion is therefore important to identify those patients who need further treatment.

One risk of cold knife cone biopsy is haemorrhage. This has made some surgeons to prefer hysterectomy instead. However this may be over treatment

especially in the young women who still have reproductive needs. It may also be sub-optimal in a few patients in whom invasion has taken place.

Before accepting the cone is therapeutically adequate an assurance of histologist is important[2]. Regular follow up Pap smears at 3 monthly interval initially and wider intervals latter when the smear is negative is advised. Colposcopy is indicated when facilities allow.

Hysterectomy should be considered in elderly patients or patients who have completed their reproductive needs.

Although screening has reduced significantly the incidence of invasive cervical cancer, the highly affected population in the developing world, have no access to cytological screening. Other simpler methods such as direct visualisation of the cervix after painting with Schiler's iodine or spraying with acetic acid can be applied. A study conducted in South Africa could identify 64% of patients who had HSIL using direct visualisation of cervix after painting with acetic acid. This is not great but it shows that simple visualisation of the cervix with 5% acetic acid without magnification can identify about two thirds of moderate dysplasia or more [1]."Speculoscopy" is a modification that is midway between colposcopy and simple acetic acid test described above. This was almost as accurate as colposcopy for identifying HSIL[1] Direct visualisation may also be used to detect a few women who need further evaluation.

In conclusion a simple cold knife Cone biopsy is still useful method for diagnosis and treatment of pre-invasive lesions. Simpler methods of screening cervical cancer or detection of pre malignant lesions mentioned above could be life saving in low resource areas where carcinoma of the

cervix is the number one killer malignant condition. But this should be emphasized together with other primary preventive measures.

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G8: PERFORATED UTERUS IN HIV SEROPOSITIVIE PATIENT: SUBTOTAL ABDOMINAL HYSTERECTOMY

Name: Mrs L.M.

Age: 38 years

Reg.No: 935833

Residential address: Manzese – Dar es Salaam

Date of Admission: 21.9.98

Date of Discharge: 25.10.98

SUMMARY

Mrs. L.M. was a 38 years old woman para 2 + 3 with 2 living children. She was referred to our centre due to symptoms suggestive of a perforated uterus following an evacuation of an incomplete abortion at a peripheral hospital.

On examination she was febrile and wasted, with extensive oral thrush. The abdomen was distended with guarding and rebound tenderness. There was no shifting dullness or fluid thrill. Pelvic examination revealed infected blood passing per vagina with normal cervix and bilaterally positive cervical excitation test. A diagnosis of a perforated uterus with pelvic peritonitis was made. This was confirmed at laparotomy and subtotal hysterectomy done sparing both ovaries. She had a stormy recovery Pre test counseling for ELISA test for HIV was done and the test was positive. Post-test counseling was also done She continued with treatment and was discharged with fair condition. The case is presented with a commentary on the contribution of HIV infection in reproductive health morbidity.

History of presenting illness

Mrs. L.M. was a 38 years old woman para 2 + 3 with 2 living children. She presented to our gynaecological ward as a referred patient from peripheral hospital with 3 days history of low abdominal pain that was dull in nature with no specific periodicity. The pain was accompanied with vaginal bleeding which was occasionally heavy with clots mixed with foul smelling vaginal discharge. This was preceded by history of a spontaneous abortion of a 10 weeks pregnancy and evacuation of her uterus at the peripheral hospital 3 days before. She denied history of intervention of the pregnancy. She had no dizziness or fainting attacks but had progressive abdomen distension, which was accompanied with intermittent fever. She had no diarrhoea or vomiting. She admitted to have significant weight loss for the previous four months.

Gynaecological history

She attained her menarche at 16 years of age with regular cycles every 30 days with periods lasting for 4-5 days and of normal flow. She had never been on any modern method of contraception.

Obstetric history

She was Para 2 + 3 with two living children. Both deliveries were hospital deliveries and the last one was two years before this illness. She had no antenatal, intrapartum or postpartum problem in any of her deliveries. All her abortions followed the last delivery and were all occurring in first tremister followed by evacuation of her uterus. The post abortal recoveries were slow characterized by intermittent fevers, which responded to antibiotic treatment. There was no febrile illness preceding the abortions.

Past medical history

She had been admitted at peripheral hospital one year before due to abdominal pain and diarrhoea. She was discharged after two weeks of hospitalization. She had no history of hypertension or diabetes mellitus in the family.

Family and social history

She was a petty businesswoman at Sinza market and her husband was also a petty businessman at Kariakoo market. She admits to have had several sexual partners before her marriage. Her husband had 2 extramarital children.

General physical examination

She was sick looking, pale, not jaundiced with mild dehydration. She was febrile (Temp. 38^{o}C) with oral thrush and was wasted. She had no palpably enlarged peripheral lymph nodes but had generalized hyperpigmented skin rashes.

Respiratory system

Respiratory rate was 20 breaths/min regular with normal vesicular breath sounds and no added sounds.

Breasts

These were pendulous with no palpable lumps.

Cardiovascular system

The pulse rate was 110 beats/min large volume and regular Blood pressure was 110/60mmHg. The first and second heart sounds were heard normally and there were no added sounds.

Abdomen

The abdomen was distended uniformly. It was tender with guarding and rebound tenderness at the hypogastrium. The liver, spleen and kidneys were not palpably enlarged. The renal angles were non tender. Shifting dullness and fluid thrill were negative and the bowel sounds were diminished.

Pelvic examination

The vulva was stained with foul smelling brownish discharge. The vagina was normal. The posterior fornix was not bulging. A pus swab for culture and sensitivity was taken at this point. The cervix was open admitting a finger. Cervical excitation test was positive bilaterally. The uterus size was difficult to feel due to tenderness and there was no adnexal mass.

Rectal examination

The anal sphincter tone was normal, rectal mucosa was normal and freely mobile.

Provisional diagnosis

Pelvic peritonitis with suspected perforated uterus.

H.I.V infection was also suspected.

Plan of management

1. Urgent Haemoglobin was taken and was 9 g/dl
2. Mid stream urine for culture and sensitivity
3. The patient was started on intravenous line with Ringer's lactate to run at a moderate speed of 40 drops/minute.
4. Blood grouping and X-matching was done and 1000 mls of blood group 0 Rhesus D Positive was requested for the patient and reserved.

5. The patient was ordered to take nothing orally and a Nasogastric tube inserted.
6. The patient was counseled about her problem and an informed consent for anaesthesia and surgery was obtained.
7. The patient was started on broad antibiotics coverage, and these were started one hour before surgery. These included:
   (i) Injection Ampicillin 500mg 8 hourly for 48 hours.
   (ii) Injection Metronidazole 500mg 8 hourly for 48 hours.
   (iii) Injection Gentamycin 80 mg 8 hourly for 5 days.
8. An indwelling catheter was inserted and left insitu. The patient was ready for surgery.
9. Since HIV infection was suspected other staff attending the patient were alerted so as to avoid unnecessary contamination with infected fluids.

Anaesthesia

This was given as described in gynaecological case No 1.

Procedure

With the patient in supine position the abdomen was cleaned using weak iodine twice and then dried with dry swab on a holder. The patient was then draped in sterile linen except the incision site. The abdomen was opened through a sub-umbilical midline incision as described in gynaecological case No. 1.

Findings

There was scanty foul smelling pus in the pelvic cavity. There was a large perforation of the uterus on the anterior aspect just above the urinary bladder. There was another large perforation of the posterior wall of the uterus. The margins of the perforation were necrotic and septic. The fallopian tubes and parts of the small bowel were involved in the inflammatory process but not injured. The large bowel and the rest of the viscera were inspected and found to be intact. The appendix was found to be normal. The paracolic gutters and subphrenic regions were also free of pus.

What was done

A pus swabs was taken for culture and sensitivity for aerobic bacteria. A specimen for anaerobic bacteria was not processed. Pus was sucked out of the pelvic cavity. Subtotal abdominal hysterectomy was done,in standard method sparing both ovaries. The necrotic tissues on the distal stump were treamed to get fresh margins. The stump was then closed using figure of eight stitches of vicryl No.1.in two layers and haemostasis was achieved. Peritoneal lavage was done with 2 litres of warm normal saline as done in gynaecological case No 4. A corrugated rubber drain was left in the pouch of Douglas and was exteriolised through anterior abdominal wall. Swabs and instruments were counted and found to be correct. The abdomen was then closed in layers as described in Gyanecological case No. 1.

Postoperative orders

- She was prescribed inj Pethidine 100mg 8 hourly for 24 hours.
- 3 Litres of intravenous Ringer's lactate were given for 24 hours.

- Pulse rate, blood pressure, respiratory rate had to be monitored hourly for six hours and then 4 hourly.
- She had to continue with antibiotics as prescribed pre operatively.

Despite above treatment the patient had a stormy healing. She presented with intermittent fever that was not responding to the conversional treatment.She also developed watery diarrhoea which was persistent.

Investigation results

1. Mid stream urine for culture and sensitivity revealed *Eschelichia coli* sensitivie to gentamycin and Nalidixic acid.
2. Blood slide for malaria parasites was Negative (several specimens).
3. Full blood count:

   Haemoglobin was 8.5g/dl

   White blood cell count (total) 3800/ml (reduced)

   Differential

   Nentrophilis 65%

   Oesinophils 3%

   Lymphocytes 24%

   Platelets 250,000/cc

   ESR 120/1st hour
4. Blood culture – No pathogens were isolated
5. Stool microscopy – Revealed no ova.
6. A rectal swab for culture and sensitivity revealed no *Vibrio cholerae, Salmonella spp* or *Shigella spp*.
7. Chest X-ray revealed a Normal chest radiograph.

8. Pus swabs for culture/sensitivity revealed *Klebsiella spices* sensitive to Gentamycin, Augumentin and Ciprofuxacin.
9. Endocervical swab for culture and sensitivity revealed *Eschelichia coli* sensitive to Gentamycin and Ciprofuxacin.

After the results of the investigations were obtained, the patient was continued on broad spectrum antibiotics but ampicillin was replaced by Ciprofluxacin. She was also put on Oral rehydration salts. Intravenous fluids were prescribed when the patient showed evidence of dehydration.

As the drain was dry it was removed on the fifth post operative day. On the same day, the wound was found to be septic and the patient continued to have interment, fevers and her condition was deteriorating.

A random blood glucose was taken and found to be 4.5mml/L. The patient was counseled for Human immunodeficiency virus screening and she accepted. The results were positive and post- test counseling was done. She was however encouraged to continue with treatment and slowly her conditions improved. Alternative stitches were removed on the seventh day and the rest were removed on the eighth day. The wound continued to be dressed with eusol and latter on honey dressing.

On the 10th day the haemoglobin was 10g/dl and was still sick looking She was put on iron and folic acid tablets as well as nystatin oral suspension. She stayed in the ward for one month and was discharged with fair condition. The wound was still wet but improving. She was instructed how to care for her wound before discharge.

Follow up

The patient was seen at the gynaecological clinic two weeks after she was discharged. She was much better with a fairly good condition. Her wound had healed and the wet portion had sealed. She was still having oral thrush but there was no evidence of intra abdominal or pelvic sepsis. Mid stream urine was sterile. She was further counseled about the problem, what was done and the ways to protect her self from further deterioration, acquisition of other viral strains and on nutrition. She was given another appointment four weeks later. She was found to be better and was further counseled. She refused her husband to be involved in the discussion and counseling process. She was referred to a specialized clinic for immunodefiency for further follow up.

COMMENTARY

The problem of HIV infection continues to affect people worldwide. In this country the first case was reported in the North western part of the country in 1983. Since then there has been reports of AIDS and HIV infection from every part of the country.

In the developed world, women are now the fastest growing segment of the population to be infected[1] As we move further in the new millennium, gynaecologists should expect more and more of their patients to be HIV infected. Worldwide it is estimated that 30-40 million people will be HIV infected by the year 2000 and in Tanzania the figure is estimated to be 2.4 million. Since heterosexual transmission is the leading mode of spread of this infection in developing world, contributing 70-80% of infections, women in

the childbearing age are particularly vulnerable. This is due to biological vulnerability, harbouring silent sexually transmitted diseases that favour transmission, and poor socio economic condition.

Apart from the general presentation of the disease as seen in other medical fields, various gynaecological conditions have been found to be associated with HIV infection in recent years.

Poor pregnancy outcome has been found to be common in HIV infected women compared to their seronegative controls. These include abortions, low birth-weight babies premature deliveries and neonatal deaths[2]. This patient presented with three recurrent first tremister abortions. This perhaps was due to her HIV sero status. This has been established even in the asymptomatic patients[2]. The biological mechanism is not clear but viral transmission across the placenta has been isolated from abortion tissues at 15 weeks of gestation. Presence of mRNA, and protein for CD4 receptors, have been demonstrated in the first tremister foetal tissues[3]. HIV embryopathy leading to severe foetal malformation incompatible with life has been suggested by some other investigators.

When known, avoidance of conception is advised in such patients. Family planning, especially the barrier methods like condoms are preferred. Additional Combined oral contraceptives may be important to augment the effect. Despite this fact it has been found that fertility rate among sero-positive mothers is high despite counseling, and that counseling seems not to influence most women's attitude towards subsequent reproductive behaviour. In Nairobi study where the chance of having an infected child is estimated to

be 30% women still opted to play with 70% chance of having uninfected child during counseling[4].

Low rate of partner notification is another serious concern in HIV sero positive mothers. Majority of them would prefer to keep the information for themselves to avoid problem with their partners just as the presented patient. This is a challenging ethical matter.

This patient presented with severe postoperative morbidity; characterized by fever, diarrhoea, and wound sepsis for almost one month following a subtotal hysterectomy, despite appropriate antibiotic coverage. This led to rapid deterioration while in the ward. Various opportunistic infections and malignancies have been found in HIV immunodeficiency patients with chronic diarrhoea[5].

Cross-sectional studies indicated a strong association between HIV infection and sexually transmitted infection particularly those involving ulceration and that control of STD significantly contribute to reduction in HIV infection rate[1]. This patient had a high risk behaviour and her partner was also a high risk one and the chance of having silent sexually transmitted infections was high.

Although no increase in the incidence of pelvic inflammatory disease has been described in HIV infected women, when it occurs it is often more severe[6]. With advancing immunosuppression, the inflammatory response may be diminished resulting in a reduction in peritonism and an increase is silent pelvic abscess formation.

Management of such patient include management of their specific gynaecological problem as well as general treatment or prophylaxis of specific

oportunistic infections. Antiretroviral treatment may be indicated but their availability and affordability is still a major problem. Moreover there is a serious challenge of resistance development. Immunorestoretive therapy has been tried in developed world with minimum success. It is however true that management in such patients is a challenge. Aggressive management particularly in women with advanced HIV disease is advisable.

Prevention of infection to the staff by notifying them on the condition is an important aspect. Use of double gloving, plastic aprons during surgery, and minimal handling of tissues will facilitate this. Use of disposable endotracheal tubes, which are discarded after use is also emphasized. Disposal of infected materials and tissues should also be done carefully, in order to prevent exposure to other patients and staff. Prefarably high levell disinfection with chlorhexidine or formalin should be done before the materials are further disposed.

With increasing awareness, HIV infected people expect their gynaecologists to be conversant with various aspects of its presentations. It is also true that counseling about safe sex, avoidance of intercourse, behavioural changes and partners notification are still a key elements in every HIV control programme. More intensive and sustained counseling may give positive results alhtough they are laboursome and may be difficult to sustain.

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G9: SECOND DEGREE UTEROVAGINAL PROLAPSE WITH CYSTOCOELE: VAGINAL HYSTERECTOMY AND ANTERIOR COLPORRHAPHY

Name: Mrs. A.N.

Age: 50 years

Reg. No. 965884

Residential address: Pemba

Date of admission: 31.10.99

Date of discharge: 11.11.99

SUMMARY

Mrs. A.N. was a 50 years Para 8 + 0 with 7 living children.She was 4 years post menopausal and presented at our gynaecological outpatient clinic with history of a mass protruding per vagina for one year. The protrusion was worse on straining and was reducible manually or on lying flat. This was accompanied with urinary symptoms but she had no bowel symptoms. Physical examination revealed a second degree uterovaginal prolapse with cystocoele but with no decubitous ulcers. There was no rectocoele or enterocoele. Vaginal hysterectomy and anterior colporrhaphy were done. She had uneventful recovery and was discharged home in good condition. The case is presented with commentary on the aetiology of uterovaginal prolapse as seen in developing world.

History of presenting illness

Mrs. A.N. presented with history of a mass protruding per vaginum which started one year before. The mass disappeared on lying flat and on manual reduction but it recurred when the patient stood up or strained. The mass was

completely painless and was not having sores. This mass was accompanied with frequency of micturition and norcturia but with no dysuria. She had normal bowel habits with no constipation and could pass stool normally. She had no history of chronic cough prior to onset of this problem and no history of excessive straining on micturition.

Gynaecological history

She had her menarche at 12 years of age with regular cycles every 30 days and painless periods lasting for 7 days of normal flow. She had never used any method of contraception and currently she was four years postmenopausal.

Obstetric history

She was para 8 + 0 with 7 living children. Her first delivery was in 1969 and the baby died at 6 years of age due to febrile illness. She could not recall exactly when she had her other deliveries but they were all home vaginall deliveries with no history of prolonged labour. She had no vulval tears during deliveries.

Past medical history

She had no history of serious illness, no history of hospitalization and therefore her past medical history was unremarkable.

Family and social history

Mrs. A.N. had never been in formal school. She was married but now a widow. Her husband died of hypertension 8 years prior to her presentation. She had no known family history of hypertension or Diabetes mellitus. There was no similar problem in other members of the family. She used to smoke cigarettes heavily but had stopped recently. She was not taking alcohol.

General physical examination

She was a middle aged patient not pale not jaundiced afebrile with good general condition. She had no peripheral oedema and no palpably enlarged peripheral lymph nodes.

Respiratory system

She had bilateral normal chest expansion and breath sounds were heard normally with no added sounds.

Breasts

The breasts were atrophic and pendulous with no palpable lumps.

Cardiovascular system

Her pulse rate was 92 beats/min good volume and regular. The blood pressure was 130/90mmHg. Apex beat was palpable at 5th intercostal space Midclavicular line. The first and second heart sounds were heard and were normal with no added sounds.

Abdomen

The abdomen was scaphoid and moved with respiration. There were no therapeutic marks and no area of tenderness. The liver spleen and kidneys were not palpably enlarged. There was no intra abdominal mass noted and there was no evidence of free peritoneal fluid. The bowel sounds were heard and they were normal.

Pelvic examination

The external genitalia were atrophic. The urethra and the vestibule were normal. The cervix was seen protruding at the vaginal introitus. There was no ulceration on the cervix. On straining the cervix protruded further outside the

vagina. There was no passage of urine on straining (demonstrated by coughing). The whole anterior wall of the vagina was prolapsing with straining demonstrating a cystocoele but the posterior wall was not. The body of the uterus could be felt in the vaginal canal but the fundus was not palpable and remained above the vaginal canal.

Rectal examination

There was a normal anal sphincter tone with normal rectal mucosa and no palpable mass or fibrous band.

Diagnosis

Second degree uterovaginal prolapse with cystocoele.

Investigations and results

1. Haemoglobin was 14g/dL
2. White blood cells count was normal with normal distribution
3. Platelet counts were adequate
4. Serum creatinine was 80µmol/L
5. Stool analysis revealed No ova or cyst.
6. Urinalysis revealed a slightly turbid urine with 18 leucocytes per HPF and Trichomonas vaginalis were seen.
7. Mid stream urine for culture and sensitivity revealed no pathogens.
8. A Chest X-ray- Revealed a normal chest radiograph.
9. ECG showed normal sinus rhythm with no obvious abnormality.
10. Blood group O Rhesus (D) Negative.
11. I.V.U. revealed normal kidneys ureters and urinary bladder
12. Cervical Pap smear for cytology was normal

13. Random blood glucose was 5.3 µmol/L

Plan of management

- Vaginal hysterectomy, anterior colporrhaphy and strengthening of pelvic floor was planned.
- The patient was counseled about the procedure and she gave an informed consent both for anaesthesia and surgery.
- She was kept on sitz bath twice daily on the day before surgery, and was given soap enema on the night before surgery. She was then starved from midnight on the night before surgery.
- Blood grouping and cross-matching was done and two units of blood group O Rh (D) Negative was made available for the patient.
- Perineal hair was shaved on the night before surgery.

Anaesthesia

General anaesthesia was given. Induction was achieved by Atropine 0.5mg I.V., Oxygen 6L/min, sodium Thiopentone 450mg and Suxamethoneum 100mg I.V. She was intubated with a cuffed endotracheal tube size 7.Surgical anaesthesia was maintained with halothane 0.5-1% and injections of Pethidine 75mg and Pancuroneum 4mg intramuscularly and intravenously respectively.

Procedure

The patient was put in lithotomy position. The perineum and the surrounding skin was doubly painted with 1% iodine and then dried with dry gauze after 3 minutes. The patient was then draped with sterile linen. She was catheterised aseptically using a metal catheter and 300mls of clear urine drained.

Pelvic examination was repeated under anaesthesia and the previous findings were confirmed. A Sims speculum was inserted in the posterior vaginal wall. The cervix was held using two little wood's tissue forceps, one on each side laterally and a third Littlewood's tissues forceps grasped the vaginal skin just bellow the urethral meatus. A metal catheter was reintroduced into the urethra so as to mark the base of the urinary bladder, which was used to guide the site of transverse cervical incision at a latter stage. A triangular incision was made with an apex just below the urethral meatus and other angles on each side of the cervix (where Littlewood`s tissue forceps are placed). A transverse incision was put on the anterior of the cervix below the base of the bladder. The formed triangular vaginal skin was then dissected and removed, care being taken not to injure the underlying urinary bladder in the process. This could be achieved by dissecting along a cleavage line of the vaginal skin and the bladder wall. The bladder was then dissected further by blunt dissection and being pushed proximally using a free gauze or a McKindoe pair of scissors. At this stage care was taken not to injure the branches of the uterine vessels laterally. It is important to mention here that this could easily occur particularly when the cleavage line is lost and the dissection goes deep into the cervical tissue. Encountered bleeders were clamped with small curved artery forceps and tied by using chromic catgut suture No 2/0.

After adequate reduction of the base of the urinary bladder, the thin transparent uterovesical peritoneum was seen. This was held by two long artery forceps and opened carefully to avoid visceral injury.

A stay suture was placed on the anterior peritoneum using catgut suture number 2/0, and held by a small artery forceps.

The cervix was then held and pulled anteriorly to expose the posterior fornix. The transverse incision made anteriorly was extended posteriorly so as to create a circumferential incision around the cervix. A blunt dissection was further done so as to separate the posterior vaginal skin from the cervix. Encountered bleeders were immediately clamped and tied. Blunt dissection was made proximally until the peritoneum covering the rectouterine pouch of Douglas was exposed. This was grasped by two artery forceps and opened after ensuring the viscera were not grasped as well. Another stay suture was put at this point and held with a small artery forceps.

The index finger was then inserted at the opening of the posterior peritoneum and the prominent uterosacral ligaments palpated apexing at the cervix. These were doubly clamped by Kocher's forceps and then resected on both sides. The stumps were transfixed with catgut No.2 suture. Using the index finger of the left hand, the cardinal ligaments and the uterine vessels of the right side were identified and were doubly clamped with Kocher's forceps and then resected. The stumps were doubly transfixed with catgut No.2. The same was done for the cardinal ligaments and the uterine vessels of the left side. At this stage the uterus could be easily mobilised and pulled out from the pelvis. It was found that there were some old inflammatory tissues involving the omentum and the fundus of the uterus. These were separated and omental vessels were clamped, resected and transfixed.

The round ligaments, fallopian tubes and the ovarian ligaments of the left side were then doubly clamped, devided and then doubly transfixed with catgut No.2. The same was done on the right side. The uterus was removed. Both ovaries were inspected and were found to be normal and they were left insitu. Swabs and instruments were counted at this point and they were pronounced correct. After haemostasis was achieved, the peritoneal stay sutures were identified and the peritoneum closed using a running suture of chronic catgut No.2/0. The suture holding the pedicles of ovarian ligaments, fallopian tubes, round ligaments, cardinal ligaments, uterine vessels, and utero sacral ligaments on each side were identified and transfixed with a running suture of vicryl No. 1 to strengthen the pelvic floor extraperitoneally. Care was taken to avoid puncturing blood vessels when passing the needle though the stumps.

Anterior colporrhaphy

After the bladder was reduced, it was suspended in position using mattress sutures of chronic catgut No.2, which were placed through the pubocervical fascia and then tied. The redundant vagina skin was excised while considering to leave enough depth of the vagina for intercourse. The vagina skin was then closed using interrupted suture of chronic catgut No.1. A two-way Foley's catheter was inserted and clear urine drained. It was ballooned and left to drain the bladder continuously. A sterile piece of gauze soaked in 1% iodine was packed in the vagina for 24 hours. Estimated blood loss was 500mls.

Reversal of anaesthesia

This was achieved using atropine injection 1 mg, Neostigmine injection 2.5mg suction, and oxygenation. Extubation was done after establishment of

spontaneous respiration. She was transferred to the recovery room and then discharged to the gynaecological ward when fully awake.

Postoperative care

1. Monitoring and charting of vital signs (Pulse rate, Blood pressure, and respiratory rate) hourly for 6 hours then 4 hourly.
2. Temperature was checked 6 hourly.
3. 3 litres of intravenous fluid of Dextrose saline were given for 24 hours.
4. Injection Pethidine 100mg (Intramuscularly.) 8 hourly for 24 hours.
5. Injection Gentamycin 80 mg 12 hourly for seven days.
6. Six hours post operatively the vagina pack was removed.
7. An indwelling catheter was left insitu for five days.

She remained stable throughout her postoperative period. She had normal and stable vital signs with no evidence of pelvic sepsis or haematoma formation.

On the third post operative day catheter specimen of urine was taken for culture and sensitivity and revealed no pathogens and the haemoglobin was 14g/dl. The catheter was removed on the morning of the fifth day post operative and she was fully continent with no dysuria or frequency. She was discharged on the same day in the evening with good condition.

Follow up

Six weeks postoperative she was seen at gynaecological outpatient clinic with no complaints, she could micturate well and had no frequency or norcturia. She had no stress or overflow incontinence. She was discharged from the clinic in good condition.

COMMENTARY

Uterovaginal prolapse is a fairly common condition, being far more frequently encountered in elderly than in young patients. It is more common in Caucasians compared to the black populations. It is responsible for around 20% of women on waiting lists for major gynaecological surgery in developed world[1]. In Quebec between 1981–1988, it was the commonest reason for hysterectomy in women older than 50 years and accounted for 13% of hysterectomies in all age groups[1].

A published South African series listed prolapse as a major finding in 29% of 2,901 hysterectomies performed[1]. It is also reported to account for 17% to 20% at two hospitals in East Africa[2].

The aetiology is generally considered in terms of weakening of the pelvic floor. However more scientific details demand in explaining this.Damage of the pelvic diaphragm during childbirth is a recognised factor contributing significantly to causation of genital prolapse. This causes over stretching and tearing of the margins of the central hiatus of the pelvic diaphragm during second stage of labour [3]. Repeated childbirths as observed in this patient might have contributed significantly towards this problem.

The pelvic organs are also supported by special ligaments, which are basicaly condensations of the facia investing the pelvic diaphragm. These form ligaments (i.e. Pubocervical ligaments, transverse cervical (cardinal) ligaments and uterosacral ligaments). Premature expulsive efforts before the cervix is fully dilated causes traction injury to those ligaments with subsequent weakening of these support structures. This patient had all her deliveries

conducted at home where proper pelvic examination to assess cervical dilatation and provision of appropriate instructions was lacking. Repeated similar incidences in a woman of high parity like her significantly contributed to the problem. High parity is the most striking predisposing factor with eleven fold increase in mothers of four or more children compared with nulliparous ones [1].

With home conducted deliveries, postnatal exercises, which facilitate improvement of pelvic floor muscle strength are unlikely and therefore contribute to the problem.

It has been documented that weakness of anorectal sphincter and pelvic floor muscles were due to partial chronic denervation of these muscles associated with obstetric injury. Pudendal nerve terminal motor latency (PNTML) and reduced fiber density (FD) during vaginal delivery is documented and is reversible in 60% of patients. This damage is said to be associated with instrumental delivery and duration of second stage of labour.

Although Mrs. A.N. had no instrumental delivery, and the duration of second stage of labour could not be estimated as she had home deliveries, her high parity put her in this risk.

Despite the fact that most of these obstetric events occur during childbearing age, the incidence of utero vaginal prolapse is more common in the advanced age as described above. This is contributed by atrophy of the supporting structures, which follows the caesation of the ovarian function. This is considered the final straw and is followed by prolapse within a few years as it was observed in this patient. Loss of oestogenic support is considered to be

the factor. However occurrence of genital prolapsed in younger generation and women of low parity suggests a possibility of inherent defect in the supporting structures[4]. This is also supported by the fact that prolapse both nulliparous and multiparous has a strong familial incidence[4,5]. When occurring in young population is associated with higher incidence of congenital anomalies as well as rheumatological and neurological disease[6]. Heavy smoking is likely to contribute to genital prolapsed indirectly due to its association with chronic respiratory problems such as bronchitis, which tend to increase the weakness of pelvic floor muscles[3].

The presented patient was a known heavy smoker who had stopped and there was no obvious evidence of this as an important contributing factor in causing her prolapse.

Other precipitating factors which are likely to contribute to this problem include; increase intra abdominal pressure, caused by constipation, straining during micturition, intra abdominal tumours, ascitis and obesity which were all not present in this patient. However this patient was a peasant where by manual work and heavy lifting would be likely, and could contribute significantly to her problem.

Although black race has been clinically found to be less affected by this problem compared to their caucasians counterparts, lack of community based survey to substantiate this hinders conclusion. Probably the black population complains less and only when they have severe forms of prolapse.

Vaginal hysterectomy was chosen in this patient as the patient had completed her family and was already postmenopausal. Other treatment modalities such

as insertion of ring perseries and Manchester Fothergill operation should be considered when dealing with a young patient who has not yet completed her reproductive needs.

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G10: OBSTETRIC VESICOVAGINAL FISTULA: SUCCESSFUL REPAIR

Name: Mrs. S.M.

Age: 24 years

Reg. No. 956135

Residential address: Kinondoni-Dar es Salaam.

Date of admission: 27.5.99

Date of discharge: 28.6.99

SUMMARY

Mrs. S.M. was a 24 years old Para 2+0 with one living child. She was seen at our gynaecological out patient clinic complaining of continuous leakage of urine per vagina following a difficult labour of which ended with rupture of the uterus. This was followed by a laparotomy and was delivered of a 3.3kg fresh stillbirth and her uterus repaired. Clinical examination confirmed the presence of a mid vaginal fistula. The patient was also found to have female genital mutilation. Examination under anaesthesia was done and a 0.5 cm diameter mid vaginal fistula was confirmed. There was no fibrosis around the fistula and no rectovaginal fistula found. Repair of the fistula was done in lithotomy position followed by uneventful recovery. She was discharged after thorough counseling. The case is presented with a short commentary on management of obtstetric vesico vaginal fistula in developing world.

History of presenting illness

Mrs. S.M. was seen at our gynaecological clinic 3 months after an operative delivery due to a ruptured uterus, which was followed by involuntary and continuous leakage of urine with no urge to micturate. She gave a history of labour pains which lasted for 2 days at peripheral hospital before she was

referred to his centre where she was immediately admitted and a diagnosis of rupture of uterus secondary to obstructed labour was made. She had a laparotomy and a 3.3kg male fresh stillborn baby delivered. Her post operative period was uneventful but she started leaking urine on the 20th postoperative day while at home. She was readmitted and the catheter re inserted but she continued leaking. She had no low abdominal pain and no loin pain or fever.

Gynaecological and menstrual history

She had her menarche at 15 years and used to have regular cycles every 28 days with painless periods lasting for 3-4 days of normal flow. She had no history of using any contraceptives.

Past obstetric history

She was para 2 + 0 with one living child who was 5 years old. Her first pregnancy was five years before. She had a full term normal delivery with no antenatal, intrapartum, or puerperal complications. Her birth weight was 2.5kg. Her second delivery was the one narrated in the history of presenting illness.

Past medical history

She had not suffered any serious medical problem so her past medical history was unremarkable.

Family and social history

She was a primary school leaver and a full time housewife. She was married to a police officer. She neither smoked cigarettes nor did she drink alcohol. She had no family history of diabetes mellitus or hypertension

General physical examination

She was a young woman of good nutritional status not pale not jaundiced with no palpable peripheral lymph nodes. However, she had ammonical smell. She had no oedema of lower limbs.

Respiratory system

Respiratory rate was 16 per minutewith bilateral chest expansion and breath sounds were normal vesicular with no added sounds.

Breasts

She had normal and well developed breasts with no palpable lumps.

Cardiovascular system

The pulse rate was 84 beats per minute regular with good volume and character. The blood pressure was 110/70 mmHg, the first and second heart sounds were heard and they were normal with no murmurs.

Abdomen

The abdomen was not distended and was moving with respiration. There was a well healed sub umbilical midline surgical scar. The liver spleen and kidneys were not palpably enlarged and there was no renal angle tenderness.

Musculoskeletal system

She had a normal gait. Muscle bulk, tone and power in the lower limbs were normal. There was no foot drop.

Pelvic examination

The patient was circumcised. The labia majora, minora and the clitoris were removed leaving a flat introitus with limited stretch ability. The rest of the perineum was healthy looking. There was no excoriation. On digital examination there was a defect felt on anterior vaginal wall at mid vagina.

The urine was continuously leaking from the anterior wall of the vagina. The vagina was spacious with no fibrotic bands. There was no any other fistula felt and there was no calculi felt in the bladder. The cervix was firm with an old tear on the left lateral side. There was no obvious palpable adnexal mass. Speculum examination was done using Sims speculum with the patient in the left lateral position. It revealed a single midvaginal fistula about 0.5 cm diameter on anterior vaginal wall. Tissues around the fistula were pink and healthy. The posterior vaginal wall was healthy.

Rectal examination

This revealed a normal mucosa with no abnormality noted.

Plan of management

(a) **Investigations and results**

(i) Haemoglobin 15.2 g/dL

(ii) White blood cells: Total 6000 WBCs/ml with normal differential.

(iii) Platelets were adequate

(iv) RBC morphology mormochromic normocytic

(v) Chest X-ray was normal.

(vi) Serum creatinine was 92 μmol/L

(vii) Pipette urine sample for culture and sensitivity revealed no significant bacterial growth.

(b) **Examination under anaesthesia**

This was done in order to determine, the number of fistulae their position and size, the state of healthy of tissues around the fistula and to decide the best position to put the patient for repair.

Under general anaesthesia, the patient in lithotomy position, the patient was cleaned with 1:20 savlon solution and draped aseptically. Sims speculum was introduced and the posterior wall of the vagina retracted. The metal catheter was introduced and a bladder neck was found to be normal. Urine was sucked out. The fistula was found to be 0.4 - 0.5 cm in diameter mid vaginal. There were no other fistulae. The vagina was specious and tissues around the fistula confirmed to be healthy. A vaginal approach repair with the patient in lithotomy position was planned.

Preoperative preparations and instructions

- She was instructed to do sitz bath with dilute savlon solution and daily douches so as to keep the area clean before surgery.
- She was informed that post repair she was going to remain in hospital for two weeks.
- Enema was given one day before surgery.
- Imformed consent for both anaesthesia and surgery was obtained

Anaesthesia

Anaesthesia was induced by intravenous atropine 1mg, Freshly prepared sodium thiopentone 400mg, suxamethoneum 100mg, oxygen 6L/min and was intubated with a cuffed endotracheal tube size 7. Anaesthesia was maintained by oxygen 6L/min, Halothane 0.5 - 1%, Pavlon 4 mg and injection Pethidine 100mg was given intramuscularly.

Operative procedure

The patient was placed in lithotomy position, cleaned with weak iodine and then draped in sterile linen. The fistula was identified using a metal catheter

through the urethra and then the fistula. It was circumcised with a scalpel followed by sharp dissection. The vaginal wall was separated from underlying bladder circumferentially. The fistula edges were freshened. The bladder wall was repaired with interrupted stitches of vicryl No. 3/0 in left to right direction. Vagina skin was repaired with interrupted stitches of vicryl No.3/0, in antero-posterior direction. The repair lines were straight in the same directions. There was no tension of tissues at the repair line. Haemostasis was achieved and water tightness was ensured using methylene blue, which was instilled in the urinary bladder. Foley's catheter size 18 was inserted, ballooned and left in to drain urine continuously. Blood loss was less than 100mls.

Reversal of anaesthesia

The patient was reversed from anaesthesia by intravenous injection of atropine 1mg, neostigmine 2.5mg, suction, oxygenation and extubation after spontaneous respiration was established.

Postoperative orders

The patient recovered well from anaesthesia and had normal vital sings. She was taken to the ward to continue with the following postoperative orders

1. I.V. fluids Ringers lactate to alternate with Dextrose saline 3 litres for 24 hours.
2. Injection ampicillin 500mg 8 hourly for 4 ~~hours~~ days then caps ampicillin 500mg 8hrly for 5 days.
3. Injection Gentamycin 80mg 12 hourly for 7 days.
4. Injection Pethidine 100mg intramuscularly 8 hourly for 24 hours.
5. Indwelling Catheter for 14 days.

6. Monitoring in put and output and keeping of charts.
7. Monitoring and charting of vital signs hourly for 6 hours then 4 hourly.

Progress in the ward

Six hours post operatively she was fully awake and conscious. She had stable vital signs and the catheter was draining well and the urine was clear. She was allowed to continue with post-operative orders.

On the first postoperative day she was fully awake. The bed was dry and there were no incidences of catheter blockage. She was afebrile, not pale with normal and stable vital signs. The chest and abdomen were normal. The catheter was draining well. She had received 2900 mls of fluids and urine out put was 1800 mls and was clear. Intravenous fluids were stopped and she was encouraged to take adequate fluids orally and light diet. On the third post-operative day, the haemoglobin was checked and was 13. g/dl.

She had smooth post-operative recovery. On 6th postoperative day she was started on vulval toilet with savlon daily. Serial catheter specimen of urine were taken and revealed no pathogens. After two weeks the catheter was removed and the patient started on urinary bladder drill where she was instructed to empty the bladder half hourly for 1 day, then hourly for another one day and then 3 hourly for another day and she remained fully continent. She developed mild weakness of lower limbs on initial ambulation but it subsided on bedside physiotherapy and ambulation. On the 16th postoperative day she was examined and was found to have healed well and was discharged home on the following instructions.

(i) She had to abstain from sexual intercourse for 3 months.

(ii) She was instructed to refrain from conception for at least one year.

(iii) She was instructed to attend antenatal clinic early in her subsequent pregnancies and she was advised for abdominal delivery.

Follow up visit

Six weeks post repair she was seen at gynaecological outpatient clinic and was found to be healthy. She was fully continent and had just finished her menstrual periods. The instructions given on discharge were further stressed and she was discharged from the clinic in good health. She was adviced to attend a near by family planning clinic.

COMMENTARY

The problem related to urinary vaginal fistula date back to antiquity. There are descriptions in the literature of such fistulae found in mummies estimated to be over 4000 years old. Vesico-vaginal fistulae remain one of the distressing and deplorable of the conditions to which a woman is liable. It leads to a number of suffering physically, emontionally and socially.

In the tropics and other less developed countries, it is a common sequel to obstructed labour. As a result, urinary fistulae are still public health problems and important feature of tropical gynaecology. Hilton and Ward did a survey in Nigeria and found that 92.2% of all urogenital fistulae were of obstetric etiology, 80.3% following neglected obstructed labour[1]. Another study done in Guinea revealed 96.23% of urinary fistulae being due to obstructed labour[2]. Other causes being cesarean section, rupture of uterus, pelvic surgeries and the remaining followed miscellaneous causes including malignancy, coital injuries, infection, radiation and trauma[1]. This critical

situation is due to different social, economic, traditional and cultural factors, which stay firmly inaltarable.

In this patient no specific aetiology could be singled out especially due to the unusual presentation after 20 days.. Obstructed labour due to cephalopelvic disproportion, malpresentation, or malposition could be responsible for the development of the fistula. Ruptured uterus with involvement of the urinary bladder or a stitch through the bladder wall during repair of the ruptured uterus, could also be responsible in this patient. Although circumcision scar tissue dystocia could also contribute, its role remain remote.

Until 17th century, there was no cure for these unfortunate patients. However, since then a number of gynaecologists have made valuable contributions to the development of operative knowledge. Despite this, management of obstetric vesicovaginal fistulae remain a challenge in gynaecological practice especially in the developing world. Strategies aimed at prevention of this problem would be the most appropriate. This include emphasis on just and equitable distribution of health care personnel and facilities, allow rapid transfer of cases to centers where appropriate obstetric care can be provided[2], and timely provision of such care. This is far from reality in most of the developing world countries[3]

Traditionally repair of obstetric fistulae is delayed for 3- 6 months. This delay intends to allow the slough to separate and inflammation to subside. The local blood supply also improves, and appearance of tissue planes producing a more favourable condition for surgery. It also allows the general condition of the patient to improve and recover from the stress of pregnancy, labour and surgery[4].

Some gynaecologists are now advocating early repair of vesicovaginall fistulae[5,6]. However majority of the cases reported in these series are iatrogenic urinary injuries and very few if any were of obstetric origin. This makes direct adoption of this principle in our set up difficult. The typical vesicovaginal fistula patient in developing world will be a young woman of low socioeconomic status. She is also likely to be anaemic, with infection as a result of prolonged and neglected labour. The fistulae in these patients are a result of field injury with lack of tissue pliability and therefore demarcation of normal and devitalized tissues may be difficult to establish before the inflammatory process subsides. With this typical presentation of the patient, sufficient time is needed to correct all these derangements and convert this morbid patient to a surgically suitable candidate before surgery is attempted. This also enables effective utilisation of the first attempt of the repair, which carries a maximum chance of success[7], by controlling factors which facilitate failure. This patient was repaired after three months. Simple trans-vaginal dissection and stitching of the fistula was done with the patient in lithotomy position.

Mode of delivery following repair of a fistula should be individualized depending on the size of the fistula the extent of vaginal skin involvement, the size of the foetus and presence or absence of other obstetric risk factors. Most gynaecologists prefer an abdominal route after a vesicovaginal fistula repair. However vaginal delivery can be attempted following repair of small fistulae with enough vaginal tissue and less tension. Strict abdominal delivery was advised for this patient as she also had a rupture of uterus, which was repaired.

In conclusion obstetric vesicovaginal fistulae continue to be one of the devastating physical, social and psychological disabling childbirth injury among women in developing world. There is a need for fistula management strategy based on classification and individualized approach to suit patient's needs.

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OB1:PERSISTENT OCCIPITOPOSTERIOR POSITION CAUSING OBSTRUCTED LABOUR IN A MULTIPAROUS WOMAN: LOWER SEGMENT CAESAREAN SECTION AND BILATERAL TUBAL LIGATION

Name: Mrs. Z.S. Gravida 4 Para 3 with 3 living children

Age: 33 years

Antenatal Number: 229/98

Residential address: Buguruni – Dar es Salaam.

Delivery number: 13449

Date of admission: 11.12.98

Dare of discharge: 17.12.98

SUMMARY

Mrs. Z.S was 33 years old gravida 4 para 3 who was referred from peripheral hospital and admitted to the labour ward on 11.12.98 because of obstructed labour. On examination she was distressed, exhausted and dehydrated but she was not febrile. She had strong uterine contractions and a pathological Bandl's ring. The foetal heart beats were present. The cervix was fully dilated. The vertex was presenting with right occipito-posterior position. There was no caput but there was a second degree moulding. An emergency caesarean section was done and a male baby weighing 4kg with apgar score 8 at one minute and 9 at 5 minutes was delivered. Bilateral tubal ligation was done by Pomeroy's method. Both the mother and her newborn were discharged home after 7 days in good condition. The case is presented with a commentary on possible aetiologies, management and outcome of labour in occipito posterior position.

Labour history

Mrs. Z.S. started labour at 10.00 am on the morning of 10.12.98 at home. She was admitted at a peripheral hospital on the same day at 9.00 pm. On arrival at peripheral hospital, the fundus was estimated to be 36 weeks and had moderate contractions. The baby was estimated to be of medium size (about 3.2kg). She had spontaneous rupture of foetal membranes soon after admission and the level of presenting part was found to be 4/5.On admission the cervix was found tobe 4 centmetres. Molding or caput was not commented up on. Four hours after admission another assessment was done. The foetal heart beats were found to be 150 per minute and regular. The contractions were strong, the presentation was cephalic and the level was still 4/5. On vaginal examination the cervix was 6cm and there was no caput or moulding. At this juncture the patient was referred to this Centre because of poor progress of labour. She arrived at this centre at 5.00 am (4 hours latter). This was about 8 hours since she was admitted at a peripheral hospital and she was immediately assessed.

Antenatal history

She did not know the exact date of her last normal menstrual period but it was early March 1998 so her calculated estimated date of delivery was mid December 1998. She was therefore term on admission. She booked at 28 weeks of gestation at Buguruni MCH clinic. On booking her blood pressure was 100/60 mmHg and her haemoglobin was 68%. Her weight was 46kg. She made seven subsequent visits and she remained normotensive throughout the pregnancy. She had no peripheral oedema. Proteinuria was not checked. She

was given Folic Acid and Iron tablets and her haemoglobin increased to 75% on her last antenatal visit 3 days before delivery. Her weight was not checked on the last visit and her blood pressure was 100/60 mmHg.

Past obstetric history

She had all her previous deliveries at peripheral hospitals. They were full term normal deliveries and the birth weight of her babies ranged between 2800g to 3100g. There were no antepartum, intrapartum or postpartum complications.

Menstrual and gynaecological history

She had her menarche at 14 years and had regular cycles occurring every 28 to 30 days with periods lasting for 3-4 days. She had never used any contraception.

Past medical history

Unremarkable.

Family and social history

She was a housewife, married to a petty businessman. There was no personal or family history of diabetes mellitus or hypertension.

Physical examination

The patient looked exhausted, distressed, sweating and moderately dehydrated. She was afebrile, (her temperature was 36.8^{o}C). She was not pale and she had no peripheral oedema. The pulse rate was 100/min normal volume. Her blood pressure was 110/70 mHg. Heart sounds were normal and the lung fields were clear.

Abdominal examination

The abdomen was enlarged and a slight retraction ring of Bandl was observed just below the umbilicus. She had a fundal height of 36 weeks with cephalic presentation at the level of 3/5. The baby size was estimated to be 3.8 kg. She had strong contractions every 3-4 minutes lasting for more than 40 seconds. Foetal heart rate ranged from 130 – 140 beats per minute and were regular. The liver and the spleen were not palpably enlarged.

Vaginal examination

The vulva and vagina were normal. There was no active bleeding. The liquor was clear and not foul-smelling. The cervix was found to be fully effaced and fully dilated. The head was presenting. There was no caput but there was second-degree moulding. The presenting part was a vertex, and the position was right occipito posterior.The pelvis was assessed and the sacral promontory was not reached, the sacral curve normal concave, blunt and short ischial spines, a wide sub pubic angle, and inter tuberous distance could accommodate four knuckles. The pelvis was therefore concluded to be adequate.

Diagnosis

Obstructed labour due to malposition (persistent occipito posterior position).

Management

1. She was planned for emergency caesarean section.
2. Intravenous fluid Dextrose/saline was set to run at 60 drops per minute. 2 litres were given fast.

3. Urgent blood group and X-matching was done and 1000 mls of cross-matched blood requested and reserved.
4. The abdomen was shaved.
5. She signed an informed consent for both anaesthesia and surgery. She also consented for tubal sterilization.

Operation

Lower segment caesarean section and Bilateral tubal ligation.

Procedure in theatre

1. The patient was catheterised and about 200 mls of clear urine was obtained. The catheter was left insitu for continuous drainage during surgery.
2. The surgeon scrubbed and dressed in sterile gown and put on sterile gloves.
3. The patient's abdomen was doubly cleaned with weak iodine and then dried with a sterile gauze.
4. She was then draped with sterile linen and only the incision site was exposed and the linen kept in place by towel clips.

Anaesthesia

General anaesthesia was given to the patient. She was pre oxygenated with pure oxygen at 6L/minute and induced with Atropine 0.5 mg intravenously,Freshly prepared sodium thiopentone 375 mg intravenously and 100 mg of intra venous suxamethoneum. She was intubated with a cuffed size 7.5 endotracheal tube enchored at 21 cm. Anaesthesia was maintained by oxygen 6 L/minute, 0.5% Halothane and Pancuroneum 4mg.

Procedure

The abdomen was opened by sub umbilical midline incision, the bleeders being identified and clamped. The lower segment of the uterus was exposed using Doyen's retractor. Each side of the uterus was packed with tagged abdominal packs soaked in warm normal saline. The loose uterovesical fold of peritoneum was picked up with a non toothed dissecting forceps and incised transversely. The lower peritoneal flaps so formed was pushed downwards using a swab on a holder thereby retracting the urinary bladder distally and a way from the incision site of the uterus. It was held in this position by applying a Doyen's retractor. A crescent shaped incision was made on the lower segment.and extended laterally with index fingers. Clear liquor was sucked out. The right hand was inserted through the incision and gently delivered the foetal head. The foetal face was then swabbed with sterile gauze, and the body delivered. A female baby weighing 4 kg with apgar score 8 at one minute and 9 at 5 minutes was delivered. The cord was quickly doubly clamped and resected between clamps. The baby was handled to the assistant for further resuscitation. Ergometrine 0.4 mg was given intravenously on delivery of the trunk and 2.5 i.u of Oxytocin diluted in 500 mls of Normal saline was also left to run. The Placenta and membranes were delivered by controlled cord traction. No Abnormality of the placenta was noted. A warm pack was applied at the placenta site to control the bleeding. Bleeding from the incised uterine margins was controlled by applying a series of green armytage clamps. The uterine wound was repaired in single layer using chronic catgut No.2 suture starting from just beyond the lateral corners of the wound. The suture was

applied by locking continuous sutures. The utero-vesical peritoneum was left unrepaired. The ovaries and tubes were inspected and were found to be normal and healthy. The packs on each side of the uterus were removed. Bilateral tubal ligation was done by Pemoroy's method. A loop of the right fallopian tube at the ampulla portion was drawn out using a Babcock's forceps applied at a portion of the mesosalpinx with the least vascularization. A straight Kocher's forceps was placed across both limbs of the loop and used to crash the base of the loop. A chromic catgut No. 1 suture was then used to ligate this base and the loop finally excised just above the Kocher's forceps. The same procedure was repeated on the left tube. The abdomen was mopped dry, the swabs and instruments were counted and pronounced correct. The abdomen was closed in two layers with vicryl No. 1 to the rectus sheath and prolene No. 0 to the skin. The vulval and vaginal toilet was done. The blood loss was estimated to be 900 mls.

Reversal of anaesthesia

Anaesthesia was reversed using 2.5mg of intravenous neostigmine and 1mg of Atropine. Suction was done and then extubation done after spontaneous respiration was established. The patient recovered well from anaesthesia and was sent to the postnatal ward with Pulse rate of 100 beats/minute and blood pressure of 120/80 mmHg.

Postoperative orders

1. The blood pressure, pulse rate, respiratory rate and temperature were monitored hourly for 6 hours then 4 hourly there after, and they remained normal.

2. Intravenous Dextrose saline 3L was given for 24 hours.
3. Indwelling catheter was left to drain the urine and Urinary output was 1500 mls at the end of 24 hours and it was clear. It was left to drain for 7 days.
4. Pethidine 100mg was given intramuscularly 8 hourly for 24 hours to alleviate pain.
5. Injection Ampicillin 500 mg was given intravenously 8 hourly for 24 hours then continued with oral ampicillin for 5 days.
6. Injection Metronidazole 500mg was given intravenously 8 hourly for 24 hours then 400mg 8hourly for 5 days.

Progress in the ward

She made a steady progress. She remained with normal vital signs throughout her postoperative period. Her haemoglobin on the 3rd day post operatively was checked and was found to be 9g/dl. She was put on ferrous sulphate and folic acid tablets. The stitches were removed on the 6th postoperative day. Her baby stayed in neonatal ward only for 24 hrs for care and was discharged to her mother. The baby received BCG and Oral polio vaccinations. She was discharged home with her baby in good condition on the 6th postoperative day. At discharge ferrous sulphate and folic acid tablets were prescribed.

Follow up

She had no complaints and her baby was doing well. She was not pale and was in good nutritional status. The surgical would had healed by primary intention and the uterus had involuted completely. There was no evidence of pelvic

sepsis. She was discharged from the clinic and advised to continue with under five clinics at the nearest maternal and child health clinic.

COMMENTARY

Occipitoposterior position is the situation in which although the vertex presents, there is malposition of the occiput such that it occupies the posterior part of the pelvis lying on either of the sacroiliac joint. During or before engagement this occurs in about 20% of labours. Radiographic studies suggest that posterior positions are more often associated with a narrow fore pelvis[1] which is a characteristic of an android pelvis. However it can occur in women with anthropoid pelvis and in symmetrically reduced gynaecoid pelvis. None of these findings were clearly evident in this patient. But this could be partly explained by an above average weighing foetus she had leading to disproportion. Other factors associated with this condition include placenta praevia, and tumours of the pelvic organs, which were also not there.

Since majority of these patients deliver successfully, chance play a large part in the aetiology of this condition and it would be wrong to assume whenever there is persistent occipitoposterior position there should be a pelvic abnormality[2]. However abnormalities if any should be excluded before any action is taken.

The outcomes of this condition vary. With adequate uterine contractions, flexion of the head might be achieved, and if the foetus is of average size majority of them undergo a long rotation of 135^0 to occupy the anterior position as they reach the pelvic floor and the foetus delivered normaly[1]. These favourable circumstances do not occur in 5 – 10% of cases. With the baby of

above average like in this patient the likelihood of this event is even poorer even with an adequate pelvis. With poorly flexed head a wider diameter presenting compromises these favourable outcomes.

Partial rotation leading to deep transverse arrest is another outcome. Short rotation to direct occipitoposterior position is also likely. None of these events occurred in this patient.

Failure of an occiput to rotate to any direction is the outcome that was observed in this patient. This could partly be contributed by a certain degree of disproportion due her foetal size[1]. The military attitude so often found in such patients signifies a state of deflexion. But whether this was the cause or effect could not be confidently said.[2]

In such circumstances often there will be a marked lateral angulation of the foetal neck, resulting the foetal head to be pushed downward and forward against the back of symphysis pubis. Therefore the forces necessary to drive the head deeply into the pelvis are often misdirected and therefore misspent. Thus it is not uncommon to have strong contractions leading to maternal exhaustion with no progress of labour.

If the deflexion is marked, the occipito frontal diameter may present instead of suboccipitobrigmatic. In patients who have epidural analgesia, the musculature of the pelvic floor loses some of its resistance, increasing the chance of failure to rotate when a vertex meets the pelvic floor[3].

Occasionally during this mechanism of labour the posterior shoulder may be caught on the wrong side of the maternal vertebral column and this too discourage internal rotation.

With the pressure of the occiput in the rectum, the patient may present with a strong urge to push[4]. Although this patient was in second stage, this urge might be there even before fully dilatation giving a false impression of a second stage. With that extent of maternal exhaustion, she might have been pushing for sometime before being referred.

When the head is in military attitude the force of contraction transmitted through the foetal spine may cause the head to extend and as sometimes occur, the chin may become held up on the superior pubic ramus leading to a braw presentation. More commonly however the process of extension continues leading to a face presentation.

In managing persistent occipito posterior position the obstetrician has several options. When in first stage of labour one may allow labour to progress and follow closely using a partograph. With long anterior rotation spontaneous vaginal delivery is possible with occipitoanterior position. When occipitoposterior positon persists up to the second stage of labour. Delivery may be achieved by either as a persistent accipitoposterior with or without instrumental, rotation to an occipito anterior position with forceps or a vacuum extractor or caesarean delivery.

With a roomy and relaxed pelvic outlet, rapid vaginal delivery may take place. However consequences of labour vary. Pearl and his colleagues found higher incidence of severe perineal lacerations, Erb's palsies and facial nerve palsies in patients allowed to deliver vaginally with persistent occipitoposterior position[5].

When a vacuum extractor is used to turn the foetal position, the Malmstrom's cup is thought to be superior to the soft cup [5,6]. But with the safety of caesarean section these manipulations have very little place in modern obstetrics.

At St. Fransisco University hospital where expectant management is encouraged, only 45% of patients delivered vaginally and it was found that operative vaginal deliveries were necessary, accompanied with severe perineal lacerations, and increased risk of foetal trauma[3]. All these risk factors should be weighed with the benefits, and the patient thoroughly assessed before a suitable mode of delivery decided up on.

Caesarean delivery was decided for this patient as she had obstructed labour and further manipulation and attempts of vaginal delivery were dangerous. Tubal sterilization was considered as she had completed her family needs.

In conclusion persistent occipitoposterior position is one of obstetric challenge that contributes significantly to obstruction of labour especially in multiparous women. When severe maternal and perinatal morbidities are anticipated, timely caesarean section significantly improves the outcome.

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OB2: SICKLE CELL ANAEMIA WITH PREGNANCY: INDUCTION OF LABOUR AND VAGINAL DELIVERY.

Name	Miss S.M
Age	24 Years
Antenatal number	228/99
Residential address	Mbagala- Dar ae salaam.
Delivery number	09338
Date of admission	8.6.99
Date of discharge	1.7.99

SUMMARY

Miss S.M was a 24 years old gravida 2 para 1 with one living child. She was a known patient of sickle cell anaemia and was on regular follow up at our haematological clinic. She booked at a peripheral clinic and was immediately transfered to our high risk clinic where she was followed up She was admitted in our antenatal ward due to anaemia at 36 weeks which was treated. Labour was then induced at 40 weeks of gestation. She had assisted second stage and had a 3.25kg male baby with good health. She was observed in the postnatal ward for two days and was discharged home together with her baby both in good condition. The case is presented with a commentary on management protocol of pregnancy with sickle cell disease.

Antenatal history

Miss S.M had her last normal menstrual period on 22.9.98 and therefore her calculated expected date of delivery was 29 .6. 99. She booked at a peripheral clinic at 24 weeks however neither weight nor blood pressure was taken. Her

haemoglobin was recorded as 72%. Although she had no symptoms, she was immediately transfered to our high risk clinic due to her known problem of sickle cell disease. She started attending at our antenatal clinic at 29 weeks of gestation. Her general condition was good. She looked mildly pale with a tinge of jaundice. Her weight was 64kg, her blood pressure was 110/70mmHg and her haemoglobin was 7.0g/dl. The fundal height was 28 weeks corresponding well with the gestation age.

Past obstetric history

Miss S.M was para 1 with one living child. In her first delivery she had eclampsia but had spontaneous vertex delivery of a 2.8kg baby who is alive and well to date. She recovered smoothly from that condition and was discharged home together with her baby on the seventh day post delivery.

Menstrual and gynaecological history

She attained her menarche at 15 years of age with regular cycles of 30 days with painless periods, which were lasting for 3 days and normal flow .She had no history of using any contraceptives.

Past medical history

She had had several admissions due to anemia during her childhood but as an adult she had never been admitted for anaemia. However she admits recent attacks of fevers, which were treated as malaria, with good response. She also had had episodes of yellow colouration of eyes of which she was counseled that it was a common finding in this condition. She was on regular follow up at our haematological clinic, and was on chloroquine tablets for malaria prophylaxis weekly and folic acid tablets.

Family and social history

She was single living with her parents. She was a primary school leaver, and she was the only member of her family of four children with this problem. She neither drank alcohol nor smoked cigarettes.

General physical examination at antenatal clinic

Miss S.M was tall, thin, slightly pale with a tinge of jaundice and malocclusion. She had no bossing of skull. She was not cyanosed and had no palpably enlarged peripheral lymph nodes. She had no finger clubbing, koilonychia or oedema of lower limbs. Her height was 167cm and her weight was 60kg. She had no bone tenderness.

Respiratory system

She had respiratory rate of 20 per minute regular with normal vesicular breath sounds.

Cardiovascular system

Her pulse rate was 86 beats per minute regular normal character and of good volume. The blood pressure was 110/70mmHg. The apex beat was at the 4th intercostal space anterior axillary line and heart sounds were heard normally with no added sounds.

Abdomen

The abdomen was distended uniformly and was moving with respiration. It was soft and non tender. The liver and spleen were not palpably enlarged and renal angles were non tender. The fundal height was 28 weeks of gestation corresponding well with the dates. The foetal movements were felt and the foetal heart sounds were 136 beats per minute and were regular.

Pelvic examination

Was not done.

Investigations and results

- Haemoglobin was 7.3g/dl
- Total WBC was 8700/mm3

  Differential -Neutrophils 42%.

  Lymphocytes 55%

  Oesinophyls 2%

  Basophils 1%

- Platelet count were adequate.
- RBC Normochromic anisopoikilocytosis, Sickle and target cells Were seen.
- Reticulocyte count was 2%
- Blood slide for malaria parasites was negative (several specimens)
- Sickling test was Positive
- Haemoglobin electrophoresis revealed homozygous Haemoglobin SS.
- Stool analysis revealed normal soft brownish stool with no ova or cyst were seen.
- Blood group was O Rh (D) Positive.
- VDRL was Negative.
- Liver function test showed slight elevation of unconjugated bilirubin. Other parameters were normal.
- Midstream urine for culture and sensitivity revealed no pathogens.

Treatment and instructions

She was given a curative dose of chloroquine tablets for malaria and was instructed to continue with two tablets of chloroquine weekly and folic acid tablets 5mg twice daily. She was advised to attend antenatal clinic fortnightly and to report immediately when she developed fever, palpitations, or bony pains. She was also advised to take plenty of fluids and have ample rest.

Follow up visits

She made 4 other visits and her weight was increasing well. Her blood pressure remained normal throughout pregnancy.rly. On each visit a physical examination was done and her haemoglobin, blood pressure, weight, and blood slide for malaria parasites were checked. She never experienced any attack of vaso-oclussion but her haemoglobin was rather fluctuating. This was managed by administration of folic acid tablets.

At 36 weeks she was admitted for close monitoring and adequate rest. At term estimation of foetal weight was done clinically and was estimated to be 3.0kg. Pelvic assessment was done and was found to be adequate for the baby. She remained normotensive throughout her pregnancy. At 38 weeks Bishop score was done and was found to be unfovourable for induction. Since she could not afford prostaglandins for cervical ripening and both the mother and the foetus were not thought to be in jeopardy delivery was postponed for two more weeks while the foetus was on surveillance. At 40 weeks the Bishop score was repeated and was found to be favourable for induction. The haemoglobin at this time was 8.4g/dL and there was no any serious problem. Induction of labour was therefore planned.

Management of labour

She was admitted in the labour ward in the morning following the last Bishop score at 8.10 am. She had good general condition, mildly pale and afebrile (temperature 37⁰ c). Her blood pressure was 130/80mmHg. She had a pulse rate of 90 beats per minute regular and of good volume.

The baby size was found to be medium, longitudinal lie and cephalic presentation. The level of the presenting part was found to be 4/5 and the foetal heart rate was found to be140 per minute and regular.

Vaginal examination

The initial vagina examination was done at 9.00 am. The cervix was found to be soft and 50% effaced. It was 1.5 cm dilated, the position could not be established, as the presenting part was still high. The pelvic cavity was assessed again and found to be adequate for the baby. The membranes were felt and were left intact.

Management plan.

1. Blood grouping and X matching was done and 1000 mls of whole blood were reserved
2. Induction of labour was started with Oxytocin 5 i.u in 1000mls of Dextrose saline and was titrated at the rate of 10,20,30,40,50,60, drops per minute with the rate changed after every 15 minutes.
3. Injection Frusemide 40mg was given intravenously and was ordered to be repeated after 4 hours.
4. Injection Ampicillin 500mg was given 8horly for 48 hours.

5. Indwelling catheter was inserted and input and output were to be monitored and balanced.
6. The patient was nursed in cardiac position.
7. Assistance of second stage of labour was planned.

Progress of labour

Four hours latter, the patient was reviewed again and was found to be having moderate contractions, (2-3 contractions per 10minutes lasting for 20-40 seconds). Vaginal examination was repeated and the cervix was fully effaced and the dilatation was found to be 2cm. The baby was in vertex presentation in left occipitoanterior position. The membranes were felt and there was no cord felt. Amniotomy was done and clear liquor with vernix caseosa drained and there was no cord prolapse. At this juncture injection Pethidine 100mg was prescribed and was given intramuscularly. She was allowed to continue with induction while vital signs, contractions, and foetal heart rates were closely monitored and charted.

- Four and half hours after the second assessment the patient was reviewed again and she was having strong contractions. She had 4-5 contractions every 10 minutes, which were lasting for more than 40 seconds. The level of the presenting part was 2/5. Foetal hearts sounds were heard and were 136 per minute and regular. Maternal vital signs were found to be normal .
- Vaginal examination revealed a fully effaced cervix and was 7 cm dilated. There was no moulding and no caput. She was allowed to continue with labour and vaginal delivery was anticipated. A ventose vacuum pump was prepared to assist the second stage.

- Three hours after the third assessment she had a strong urge to push.She was found to be in second stage. She was transferred to a high bed and was put in lithotomy position. The head was found to be well flexed so the perineum was cleaned with 1:20 concentration of savlon and draped with sterile linen.

The operator scrubbed himself and put on sterile gloves. Malmstrom's vacuum extractor was used. After having been checked and found to be in working condition, cup No5 was inserted by first applying traction on the perineum using the index and middle fingers of the left hand. The cup was applied to the foetal occiput, and it was made sure that the maternal tissues were not caught by palpation of the rim of the cup all around. The assistant with the hand pump made a few strokes until the pressure gauge was $0.2kg/cm^2$. Further palpation was done at this point to ensure that no maternal tissues were grasped by the cup. The suction was then increased at a rate of $0.2kg/cm^2$ every 2 minutes until the pressure gauge read $0.8kg/cm^2$. When the contraction came, gentle traction was applied using the right hand making sure that it is applied at the right angle to the plane of the cup and also in the direction of the axis of the pelvic cavity. Towards the end of contraction, traction was stopped and only a slight pull was maintained on the traction chain. At this point the perineum was assessed and was found to be roomy enough and episiotomy was thought to be unnecessary. With the second traction, the head was lifted from the sacral curve as it crowned. Oxytocin 0.5 i.u. was given intravenously as the anterior shoulder was delivered. The baby was then delivered completely. The cord was doubly

clamped and then resected. The baby was handed to the assistant for resuscitation and assessment. The placenta and membranes were delivered completely. There was a small perineal tear which was repaired primarily while the assistant is taking care of the baby. Estimated blood loss was 150 mls. The uterus was palpated through the abdomen and found to be well contracted. There was no active bleeding per vagina.

The baby

She had a male baby weighing 3.25kg with apgar score of 7 at one minute and 9 at five minute. There was no obvious congenital malformation.

Progress in the ward

Post delivery she had no serious problem noted. She was therefore transferred to the postnatal ward for observation. First day post delivery she was in good condition and her baby was sucking well. The baby received BCG and Oral polio vaccine. Second day post delivery the haemoglobin was checked and was found to be 9.2 g/dl. She was discharged home together with her baby in good condition and was put on Folic acid tablets and weekly chloroquine tablets for malaria prophylaxis.

Postnatal follow up

Six weeks post delivery she was seen at postnatal clinic. Her haemoglobin was 9.2g/dl. She had no serious problem and the baby was also in good condition. She was counseled on family planning and was instructed to continue with vaccination schedule for her child at the nearest maternal and child health clinic. She was also instructed to continue with the follow up at the haematological clinic.

COMMENTARY

Sickle cell anaemia results from a single ß chain substitution of glutamic acid by valine because of an A for T substitution at cordon 6 of the B globulin gene. Sickle cell anaemia, Sickle haemoglobin C disease and Sickle cell B thalasaemia disease are the most common of the sickle haemoglobinopathies[1]. In east Africa, sickle cell anaemia as encountered in miss S.M is the commonest subtype. While pregnancy does carry risk for the woman with Sickle cell anaemia and for the foetus, studies have shown that pregnancy can be well tolerated by the major genotypes[2].

Despite this fact, pregnant mothers with sickle cell anaemia should be closely monitored. Antenatal sickling complications have been observed to occur in 46.2% of pregnancies and postnatal sickling complication occurred in 7.7% of pregnancies[3]. Pregnancies complicated by sickle cell disease were significantly more likely to be associated with anaemia, preterm delivery, Proteinuric hypertension, birth weight bellow 10th centile and caesarean section as an emergency procedure compared to the general population[3]. Severe sickling complications occur more commonly in the third tremister.

While complications for both sickle related events and for pregnancy are seen, data to date state that women are able to complete their pregnancies successfully. Counseling, regular prenatal visits, and aggressive treatment of acute events are mandatory for successful completion of pregnancy[2].

On first visit these patients should be thoroughly examined and investigated to establish their haemoglobin status, the full blood count, sickling test, and haemoglobin electrophoresis so as to confirm the diagnosis. Blood slide for

malaria parasites is an important investigation especially in endemic areas. Midstream urine should also be taken for bacteriological studies.

After the initial work up, close medical follow up is indicated throughout the pregnancy, so as to allow close monitoring of general condition of the patient, detection of infections and other conditions which are likely to trigger the crises. Sudden worsening of the conditions may demand immediate medical attention.

A curative dose of malaria was prescribed on initial visit to our high risk clinic and then prophylactic chloroquine tablets were prescribed weekly to prevent attacks of malaria, which are likely to worsen the situation [4].

Folic acid supplementation was prescribed in this patient in a much higher dose than routinely prescribed so as to cope with the high turn-over of red blood cell mass. Iron supplementation was not prescribed in this patient, because these patients have saturated Iron stores as a result of high turn over of red blood cells. This is particularly so in malaria endemic areas[5].

In absence of infection or nutritional deficiency, the haemoglobin concentration usually does not fall bellow 7g/dl[1]. Miss S M maintained about a similar level of haemoglobin concentration until at 36 weeks, when her haemoglobin fell suddenly to 6.4g/dL without evidence of infection. This necessitated her admission. However she was managed conservatively with no blood transfusion. A policy of exchange transfusion in all women with homozygous sickle cell disease from 28 weeks is recommended by some Obstetricians to reduce the risk of maternal complications in the third tremister and puerperium[3]. However considering the risk of transfusion such

as alloimmunisation, viral infections, iron overload and others, the authour has the opinion that this policy should not be a general rule. Other obstetricians have found no proof that this policy alters outcome of pregnancy. The recommendation is therefore transfusion should be reserved for patients with complications, which necessitates it[4].

Delivery of this patient was planned to be at 38 weeks. However this was then deferred as the Bishop's inducibility score was not favourable. Since there was no evidence of maternal or foetal jeopardy and considering the risk of anaesthesia and surgery, postponement of delivery was thought to be safe to the mother and the foetus. Maternal and foetal surveillance was aimed at ensuring immediate action when the need arose. This enabled induction of labour to be done at 40 weeks of gestation.

Management of labour is another area of concern for patients with sickle cell anaemia. Blood should be grouped and reserved in case the need arises. Both fluid overload and dehydration are particularly dangerous in such patients. Since this patient was induced with oxytocin drip, a small dose of frusemide was prescribed simultaneously. This was intended to prevent fluid overload and subsequent pulmonary oedema. Women with sickle cell disease seldom die of heart failure, however the basal haemodynamic state is characterised by high cardiac output which is further augumented by pregnancy[4].

Strong analgesics are advocated in such patients as pain may trigger the crises. This is especially when labour is well established. Epidural analgesia would have been the best analgesia but the facilities for its administration were not available.

Assistance of second stage is another important management aspect as maternal bearing down efforts during second stage of labour may provoke heart failure. Ergometrine is purposely avoided as it has massive vasoconstrictive effect, which is likely to cause heart failure or vaso-oclussive crisis.

Apart from these complications, there are other rare complications, which may be severe and life threatening during labour. A knowledge of these complications is important when managing such patients during labour so as to manage them correctly when they arise. Rapid enlargement of the liver and spleen is likely to occur during labour. This presents with acute fall of haemoglobin of more than 2g/dl indicating acute sequestration. Urgent action is needed in such condition to save life.[4] A vasooclussive crisis is likely to occur and lead to marrow embolism. Heparin may be indicated as well as strong analgesics. Sudden increase in systolic blood pressure and albuminuria may occur in patients with vasooclussive crisis. This is likely to occur in labour or postpartum[4].

In conclusion an increasing number of sickle cell disease patients are reaching childbearing age. The high risk of foetal and maternal complications in pregnant sickle cell diseased patients, mandates multidisciplinary management during pregnancy, delivery and postnatal period.

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OB3: DIABETES MELLITUS IN PREGNANCY: INDUCTION OF LABOUR AND VAGINAL DELIVERY AT 38 WEEKS OF PREGNANCY.

Name: Mrs. A.N

Age: 30 years

Antenatal number: E/414/9

Residential address: Temeke -Dar es Salaam

Delivery number: 08653

Date of admission: 16.6.99

Date of discharge: 21.6.99

SUMMARY

Mrs. A.N. was 30 years old gravida 4 para 3 with 2 living children who booked at our antenatal clinic for follow up and control of blood sugar. She was a known diabetic patient diagnosed 8 years prior to this conception and was on insulin. She was followed up antenatally and her blood sugar was controlled with insulin. At 38 completed weeks a Bishop's inducibility score was done and found to be favourable. She was induced by artificial rupture of membranes and oxytocin drip, and delivered a 3.4kg female baby with good condition. She was discharged on the fourth day post delivery with her baby, both in good condition. The case is presented with a short commentary on the importance of screening and management of diabetes mellitus in pregnancy and labour.

Past obstetric history

Mrs. A.N was gravida 4 para 3 with two living children she was a known insulin dependant diabetic patient for 8 years and was maintained on insulin lente and soluble, 40 i.u each in the morning and 30 i.u each in the evening.

In her first pregnancy, which was 10 years before, she had a full term delivery but the baby had spina bifida cystica and ended up in early neonatal death. Following this she was not investigated and was discharged home. Her second delivery was eight years before the index pregnancy, and had a full term normal delivery of a 4kg female baby with no antepartum or post partum complication. Following this delivery she was investigated and she was found to have diabetes mellitus. She was then started on treatment. The third pregnancy was 4 years later, and at this time she was already on insulin. She had a 3.5 kg female baby with good general condition.

Antenatal history

She had her last normal menstrual period on 23.3.98 and therefore her expected date of delivery was on 30.6. 99. She booked at our high risk antenatal clinic late at 23 weeks. She had no polyuria and no polydipsia but she complained of nocturia since conception. This coincided with high RBG (13.3 mmol/L). This was found to be due to poor compliance to medication. She had no frequency, dysuria or loin pain and had no vaginal discharge suggestive of candidiasis. On booking her weight was 78 kg and her blood pressure was 110/70 mmHg. She had no oral thrush and no oedema of lower limbs. Her haemoglobin was 13.4 g/dl. She had no protein in urine. Mid stream urine for culture and sensitivity revealed no pathogens. She remained normotensive throughout her pregnancy. She was counseled and advised to comply to her medication as prescribed (Insulin lente 40 i.u and soluble 40 i.u) in the morning and 30 i.u each in the evening). This led to disappearance of the norcturia she had. Following this her Random blood sugar went down to 4.9mmol/L. She had no skin infection throughout pregnancy. At 38

completed weeks she was admitted in the ward. A Bishop's inducibility score was done and was found to be favourable and induction of labour was planned.

Gynaecological and menstrual history

She attained her menarche at 16 years of age with regular cycles every 28 – 30 days with painless periods lasting for 3 days and normal flow.

Past medical history

She had no history of major illness, apart from what has been narrated above.

Family and social history

She was a housewife. She occasionally took alcohol but did not smoke cigarettes. Her husband was a petty businessman. There was no known history of hypertension in the family and no diabetes mellitus in other members of the family.

General physical examination

On initial visit she was found to be a young lady of heavy built not pale not icteric and afebrile. Her height was 159.5cm and weight was 78kg. She had no palpably enlarged peripheral lymph nodes, no oedema of lower limbs and no any dermatological problem.

Respiratory system

Respiratory rate was 18 per minute bilaterally symmetrical chest expansion with normal vesicular breath sounds.

Cardiovascular system

A pulse rate was 80 beats/min regular and of good volume. Blood pressure was 130/80 mmHg with normal jugular venous pressure. The apex beat was

at the 5th intercostal space mid-clavicular line. Heart sounds were heard normally and there were no added sounds.

Central nervous system

She was fully conscious well oriented to time place and person. The visual acuity was normal bilaterally. There were no muscle wasting and sensation was normal. The muscle power was normal in both upper and lower limbs.

Abdomen

It was uniformly distended with no therapeutic marks or surgical scars. The liver and spleen were not palpably enlarged and renal angles were not tender. The fundal height was equivalent to 24 weeks of gestation and corresponded with the dates. There was no evidence of polyhydramnious. The foetal parts were felt.

Pelvic examination

There was no evidence of vaginal candidiasis and there was no any other obvious pathology noted.

Investigations and results

1. Haemoglobin 12.8 g/dl
2. Blood slide for malaria parasite was negative
3. Urine analysis – Sugar +
   - No ketone bodies
   - No protein
   - Cells (Pus cells) < 5 per high power film.
4. Midstream urine culture revealed no organisms.
5. Fundoscopy revealed both fundi to be normal.
6. Stool analysis revealed normal soft brown stool with no ova or cyst.

7. Ultrasound done on 10.5.99. Revealed normal single tone foetus with fundal, anteriory situated placenta.The liquor was adequate and Bi parietal diameter of 84mm corresponding to 33 weeks of gestation. There was no foetal abnormality detected.

Conclusion

A well controlled insulin dependent diabetes mellitus in pregnancy.

Plan for management

1. Follow up the patient antenataly while on the same dose of insulin.
2. Deliver the patient at 38 completed weeks.

Treatment

1. Insulin lente 40 i.u and soluble 40 i.u in the morning and 30 i.u each in the evening. This was given ½ hour before meals.
2. Two tablets of chloroquine were given weekly for malaria prophylaxis.
3. Tabs folic acid 5mg was given once daily and Ferrous sulphate 200mg was given twice daily.

Response to treatment

After the patient adhered to the treatment, maternal random blood glucose taken at various stages of pregnancy was ranging between 3.9 – 4.9mmol/L which was normal. She had no premonitory symptoms and signs.

The serial fundal height assessments were corresponding well with the gestational ages by dates. There was no polyhydramnious, the foetal movements were felt normally.

The mother remained in reasonably good health. She did not have infections. At 38 weeks she was weighing 82 kg, the haemoglobin was 12.8 g/dl and was not oedematous.

Induction plan

The patient was explained the rationale for induction at 38 weeks. She understood and accepted it. She had a good Bishop's inducibility score of 9.

The day of induction

1. The physician and paediatrician were notified.
2. Insulin was continued until on the morning of induction
3. Patient took nothing orally after midnight.
4. A fasting blood glucose was taken early in the morning of induction and was found to be 3.5 mmol/L. Urine sugar and ketone were negative.
5. An I.V. line of 5% dextrose was set.
6. Her general condition was good and she was afebrile. The pulse was 88 beats per minute, and a blood pressure 130/80 mmHg.
7. Abdominal examination revealed a fundal height corresponding to 36 weeks. She had a longitudinally lying foetus with cephalic presentation. The level was 4/5 . The baby size was estimated to be about 3.6 kg. The foetal heart sounds were heard and were 144 beats per minute and regular.
8. Vaginal examination revealed a normal vulva and vagina, the cervix was anterior soft, 50% effaced 2.5 cm dilated, vertex presentation with left occipito anterior position. The pelvis was found to be adequate for the baby.

Artificial rupture of foetal membranes was done at 0830 hours, clear liquor with vernix caseosa was obtained and the cord was not palpable. Oxytocin 5 i.u. in 1000mls of 5% dextrose was instituted and titrated at 10, 20, 30, 40,

50, up to 60 drops per minute. The rate had to be changed after every 15 minutes and titrated against contractions.

Intrapartum observation

- She was started on a partogram for close monitoring of her labour progress.
- Pulse, blood pressure, foetal heart beats remained within normal limits throughout labour.
- Urine sugar and ketones remained negative.
- Intermittent (2-3 hourly) blood glucose remained within normal range (Between4.2mmol/L and 6 mmol/L).

Labour progressed well and she was fully dilated after 10 hours. The second stage was successfully assisted by a low cavity vacuum extraction as described in obstetric case number 2. A male baby weighing 3.8 kg with Apgar score 7 & 10 at 1 and 5 minutes respectively was delivered. The third stage was complete and uneventful. The baby was normal and had no external congenital malformations. The baby oropharynx was sucked and resuscitated and immediately sent to the neonatal unit for observation and blood sugar monitoring. 10%glucose infusion was prepared to treat hypoglycaemia. Both the mother and her baby faired well. She was advised to skip that evening dose of insulin as she had starved the whole day. The next morning the random blood glucose was 11.6 mmol/L. She was restarted on insulin and the blood glucose went to normal (ranging between 3.9 mmol/L to 4.2. mmol/L). She was observed in the postnatal ward for 3 days and was discharged with her baby both in good condition. She was to continue with

insulin 40 i.u each (soluble and lente) in the morning and 30 i.u each in the evening. She was advised to attend at postnatal clinic after 2 weeks.

Postpartum review

She was reviewed 2 weeks after delivery and she was found to be euglycaemic and the baby was in good condition. 6 weeks post delivery she was seen again and was found to be in good general condition, she was discharged through a diabetic clinic after being counseled for family planning as she had not completed her family size.

COMMENTARY

Diabetes mellitus is one of the serious medical problems affecting the general population. Mothers in the reproductive age are particularly seriously affected when this condition co exists with pregnancy as it is frequently associated with complications, which increase maternal and foetal morbidity and mortality. Systematic screening of normal pregnancies has been recommended to improve maternal care[1] however this approach increases cost and it has been challenged in populations with low prevalence of diabetes mellitus[1]. In Tanzanian population, the exact magnitude of the problem in the child bearing age is not known, however data on the complications associated with this condition in pregnant mothers and their newborn are common and that the idea of screening is relevant.

Diabetes is currently identified by one of the three criteria: a fasting blood glucose of 7.8 mmol/L (140mg/dl) or higher on two occasions, symptoms of uncontrolled blood sugar with random blood glucose of 11.1 mmol/L (200mg/dL) or positive oral glucose tolerance test.

This patient was completely asymptomatic before starting her childbearing career. She was asymptomatic still when she had her first congenitally malformed newborn. Although this congenital malformation is not necessarily attributable to diabetes mellitus, it is suspicious. This is because neural tube defects as observed in her first delivery are fairly common in newborn babies of diabetic mothers.

Diabetes teratogenesis is related to first tremister hyperglycaemia with most anomalies occurring by the seventh gestational week[3]. Since diabetic gravids frequently seek prenatal care after this critical period, attempt to reduce the incidence of congenital anomalies, have been frustrated even in the developed world. An above average sized baby, was again found in this patient in her second delivery which was the initial clue towards diabetes mellitus. Following this she was started on insulin and she seemed to respond well as indicated in her third delivery.

The oral glucose tolerance test, although long considered the standard for detecting diabetes, has many pitfalls, and is now being replaced by more reliable methods.

It has been suggested that levels of glycosylated haemoglobin which is formed by irreversible union between glucose and haemoglobin, may be useful in the diagnosis of diabetes mellitus[3]. The rate of formation of glycosylated haemoglobin is directly proportional to the ambient glucose concentration. Although this is promising screening method for diabetic mothers with Gestational diabetes mellitus, its wide application is still remote especially in third world countries like ours.

In our set up oral glucose tolerance test and fasting blood glucose remain the more important screening methods. Those candidates with doubtful results or those at high risk, should be subjected to other more specific and reliable investigations or the fasting plasma glucose measurement should be repeated[2]. Data from two large community based studies was used to assess the value of glycosuria testing in the detection of diabetes. The positive predictive value of glycosuria for a diagnosis of diabetes was 48% and sensitivity was 64%[4]. Sensitivity was higher among overweight and or hypertensive subjects.

Antenatal management of these patients entails achieving euglycaemia so as to improve pregnancy outcome. Other important aspects include prevention and control of infections by regular check ups. Candidiasis and urinary tract infections are particularly common in such patients. Asymptomatic bacteriuria is common and therefore regular samples of urine for bacteriological studies are emphasized.

The optimal time of delivery is important in these patients. Delivery after 37 completed weeks is advised as it is documented that the placenta aging is much faster in these patients as compared to their normal counter parts. Other obstetricians however argue on the rationale of inducing labour at 37 completed weeks in a well controlled sugar level as in this patient. The inducibility of the cervix at 38 weeks, the possibility of poor compliance shown by this patient in early pregnancy and lack of added advantage both to the mother and the new born as a result of prolongation of pregnancy were considered, before induction was decided.

The mode of delivery is to be individualised based on foetal size, favourability of the cervix for induction and presence or absence of other obstetric risks. Caesarean section, carry a risk of infection and blood sugar derangement especially during oral intake restrictions. It should therefore be considered only when there are obstetric indications. This patient was induced as vaginal delivery was thought to be safe and favourable. Intrapartum close blood sugar control is another important management aspect which is aimed at avoiding blood sugar derangement which is likely to lead to serious maternal morbidity and perinatal morbidity or mortality. Prolonged labour should be avoided as the risk of infections and metabolic derangement increases with duration of labour.

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OB4: CERVICAL INCOMPETENCE: DELAYED EMERGENCY MCDONALD SUTURE AND SUCCESSFUL VAGINAL DELIVERY AT TERM.

Name: Mrs. R.A.

Age: 24 years

Antenatal number: 268/99

Residential address: Mbagala – Dar es Salaam

Delivery number: 15910

Date of admission: 20.7.99

Date of discharge: 12.11.99

SUMMARY

Mrs. R.A. was a 24 years old Gravida 6 Para 0 + 5. She was referred from a peripheral health facility to this centre at a gestation age of 23 weeks due to recurrent second tremister abortions suspected to be caused by cervical incompetence. She was counseled and was advised for a cerclage which she refused and requested time so that she could discuss with her husband. However, she was admitted for bed rest. At 24 weeks of gestation, she was found to have a long open cervix with membranes bulging through the internal os. An emergency McDonald suture was placed and the patient kept in the ward for rest while on tocolytics. One week later, she was discharged home and was seen at antenatal clinic regularly with no serious problem. At 38 weeks the cerclarge was removed and labour augmented. She delivered a 3.2kg male baby by spontaneous vertex delivery and was discharged together with her baby in good condition. The place of Delayed emergency cervical cerclage in patients with cervical incompetence is presented and discussed.

Past obstetric history

Mrs. R.A. had her first pregnancy in 1994 which ended up in abortion at 4 months of gestation. The abortion was preceded by vaginal bleeding, and then expulsion of the products of conception. Evacuation of the uterus was done and was then discharged home in good condition. Her second pregnancy was a year later. She had abdominal pain and vaginal bleeding with subsequent expulsion of a live foetus at 6 months. The foetus died shortly after abortion. Her third pregnancy was in 1996. Again vaginal bleeding started at 4 months of pregnancy and then sudden expulsion of products of conception, this time with no abdominal pain at all and she had evacuation of the uterus and discharged home in good condition. Her fourth pregnancy was a year after the third pregnancy and this also ended in a spontaneous abortions at 4 months preceded by abdominal pain and vaginal bleeding. Her fifth pregnancy was a year before the index pregnancy and this also ended up in abortion at 3 months preceded by abdominal pain and vaginal bleeding. All the abortions were not preceded by febrile illnesses or trauma. In her first four pregnancies she was able to see the foetuses and she was told there were no obvious anomalies of the foetuses noted. She was not able to see the foetus in her last abortion, which was only 3 months. There was no post-mortem done in any of the foetus aborted.

At various periods she consulted medical personnel for advice and was screened for syphilis and diabetes mellitus, which were found to be negative. Other investigations to exclude infections such as Cytomegalo virus infections, or pelvic ultrasounds to exclude uterine or cervical anomalies were not done.

Antenataly

She had her last normal menstrual periods late January 1999 and therefore her calculated expected of delivery was early November. 1999. She booked for the index pregnancy at 14 weeks of gestation with 52 kg. The blood pressure and haemoglobin were not checked both at booking and on the second visit. She was referred to the high risk antenatal clinic at about 23 weeks of gestation where baseline investigations were performed and then advised to be admitted to the antenatal ward. She was counseled about her condition and that she needed a cerclage to keep her pregnancy in utero, which she refused until she discussed with her husband. However she accepted to be admitted. She was advised to tell her husband to see the doctor for counseling. She was seen again four days later while in the ward. She was examined and was found to have a long and dilated cervix with membranes herniating into the cervical canal. She was re-counseled about her problem and the correct management this time together with her husband. She accepted and an emergency McDonald cerclage planned on the same day.

Gynaecological and menstrual history

She had her menarche at 15 years with regular cycles of 30 days with periods lasting for 7 days. She denied history of surgical manipulation of the cervix apart from the evacuations of the utetus she had. She gave history of using combined oral contraceptives following the first abortion but stopped for the second pregnancy and never used them again:

Past medical history

She had no history of excessive appetite, urination or thirsty. She denied any history of genital ulcers, abnormal vaginal discharge or generalized skin rashes. She had no history of excessive heat, cold or sweating. There was no evidence of thyroid diseases.

Family and social history

She was a primary school leaver married to a petty businessman. She had a stable relationship with her husband. She neither smoked cigarettes nor was she drinking alcohol. There was no family history of hypertension, diabetes mellitus or history of thyroid diseases.

General physical examination

She was a healthy looking young woman afebrile, not pale not dyspnoic and not jaundiced. She had no palpably enlarged peripheral lymph nodes. Her height was 142 cm.

Respiratory system

Her respiratory rate was 20 per minute with symmetrical chest expansion. She had normal vesicular breath sounds with no added sounds bilaterally.

Cardiovascular system

Her pulse rate was 84/min regular of good volume. The blood pressure was 130/90 mmHg. The heart sounds were normal with no murmurs.

The abdomen

The abdomen was distended with a gravid uterus whose fundal height was corresponding to 24 weeks. The liver and spleen were not palpably enlarged. The renal angles were non tender and free of masses.

Pelvic examination

The vulva was normal. Speculum examination revealed a cervix 2cm long with no lesion. The cervix was open about 1.5cm with membranes herniating into the cervical canal. There was no discharge from cervix and no leakage of liquor amni was noted.

Provisional diagnosis

Recurrent mid-tremister abortions, possibly due to cervical incompetence.

Investigations and results

- Haemoglobin was 10.0g/dl
- VDRL was Negative
- Blood group was 0 Rh (D) Positive
- Mid stream urine for culture and sensitivity revealed no bacterial growth
- Serum creatinine was 75 umol/L
- Random blood glucose was 4.2mmol/L.
- An obstetric ultrasound which was requested from the peripheral clinic, was done a few days prior to insertion of a McDonald's suture and revealed a gravid uterus with a single living foetus with Bi-parietal diameter corresponding to 24 weeks. There were no gross foetal abnormalities detected. There were no fibroids or adnexal masses detected. The state of the cervical canal was not commented up on.

Plan of management

Cervical cerclage placement.

Preoperative preparations

- The patient was fasted from the time the decision for surgery was made.
- An informed consent was obtained for anaesthesia and surgery.
- The perineum was shaved and cleaned with soap in the ward.

Anaesthesia

The patient was induced using Atropine 1 mg. Intravenously sodium thiopentone 250 mg and Oxygen 6L/minute. Maintenance of anaesthesia was achieved by Halothane 1% and oxygen 6 litres per minute given by face oxygen mask.

Procedure

The patient was put in lithotomy position. The perineum and vagina were cleaned with 5% savlon solution and draped with sterile linen. The urinary bladder was emptied using a metal catheter and 200 mls of clear urine was drained. The posterior vaginal wall was retracted using a Sims speculum so as to enable visualisation of the cervix.

There was dilatation of the cervix and the membranes could be visualised bulging through the interval os. The patient was therefore tilted to a slight head down position while in lithotomy position so as to degravitate the membranes and the membranes were further reduced carefully by using a sponge on a holder.

The anterior and posterior lips of the cervix were held with mild traction using two non-serrated sponge holding forceps. The McDonald stitch was applied using Proline No.2 around the cervix as a pulse string suture using a round-

bodied needle at the level of the vesico-cervical vaginal skin. The stitch was first inserted at 12 O'clock, to emerge at 9 O'clock, similar bites were made at 6 O'clock, and 3 O'clock and a double knot secured at 12 O'clock and tightened gently to a point where cervical secretions could pass easily. At the end of procedure there was no significant bleeding and there was no liquor draining.

Reversal of anaesthesia

The patient was reversed from anaesthesia by oropharyngeal suction, and oxygenation by face oxygen mask until she was completely awake. She was transferred to recovery room then to the antenatal ward.

Postoperative orders

- To start oral feeds as soon as she fully recovers from anaesthesia.
- Tablets pacetamol 1g 8 hourly for 24 hours.
- Tablets Salbutamol 4 mg 8 hourly for seven days.
- Abnormal vaginal discharge or bleeding had to be observed.
- Abdominal pain had to be observed.

Progress in the ward

She had a smooth recovery and 6 hours post surgery she was fully conscious. However she complained of abdominal pain which was dull in nature. It was not rhythmic labour-like. This was treated with Paracetamol and Salbutamol and subsided. She had no vaginal discharge or bleeding. She was discharged after 5 days and was advised to attend at antenatal clinic fortnightly. She was advised to avoid sexual intercourse for 2 weeks and to avoid strenuous work.

Follow up at antenatal clinic

Two weeks after insertion of the suture she was seen at antenatal clinic. She had not experienced any abdominal pain after discharge and had no vaginal discharge. Her blood pressure was 100/60 mmHg and Haemoglobin was 12.0g/dl. Fundal height corresponded to gestational age. Speculum examination revealed sutures insitu and the cervix was not effacing. She continued to be followed fortnightly up to 36 weeks of gestation then she was seen on weekly basis. She continued to be normal throughout the pregnancy with a well growing fundus in relation to her gestational age.

Removal of cerclage and labour history

At 38 weeks of gestation, a Cuscos speculum was inserted aseptically with the patient in lithotomy position. A loop of the string was pulled and then cut beyond the knot and then the suture pulled out.

Pelvic examination revealed a 50% effaced cervix, 3 cm dilated with intact membranes. The cord was not felt. Amniotomy was done and clear liquor with vernix caseosa drained. There was no prolapse of the cord. The presenting part was at-2 station. The pelvis was assessed and was found to be adequate for the baby. Augmentation with 5.0 units of oxytocin in 500 mls of Dextrose saline titrated at a rate of 10,20,30,40, 50 to 60 drops per minute was started. The rate had to be changed after every 15 minutes. Close monitoring of labour using the partogram was done. After 4 hours she delivered a 3.2kg male baby with apgar score 8 and 10 at one and five minutes respectively. The baby had no obvious anomaly. The placenta and the membranes were delivered by controlled cord traction and were completely delivered. The estimated blood

loss was 150 mls. The mother and the baby were allowed to rest in the labour ward for about one hour and then transferred to the postnatal ward. The baby received oral polio and BCG vaccinations and both were discharged home in good condition a day after delivery.

Follow up

6 weeks post delivery the mother and the newborn were seen at the postnatal clinic and were both in good condition. The mother was advised about family planning and was discharged from the clinic. However was advised to continue with routine vaccination schedule for her newborn and to attend at this high risk clinic in her subsequent pregnancy.

COMMENTARY

The term cervical incompetence is applied to a discrete obstetric entity. It is characterised by painless cervical dilatation in the second trimester or perhaps early third trimester with prolapsed and ballooning of the membranes through the cervix, followed by rupture of membranes and expulsion of immature foetus. Although not all of her pregnancies presented classically like this a history of recurrent mid tremister abortions with history of expulsion of a live foetus in her second pregnancy rise suspicion. Having a painless expulsion of products of conception experienced in her third abortion increases further the suspicious index.

Unless effectively treated this sequence tends to repeat in each pregnancy as it has been exemplified by this case. Numerous methods have been attempted to make a diagnosis of this condition in pre pregnant state but has not shown promising results.

During pregnancy, attempts to diagnose this condition have been made by ultrasonic techniques, where by cervical length have been followed in suspected patients with some success. Clinical diagnosis based on careful observation, and history of events provided by the patient, remain the most important tool of diagnosing this condition.

Although the cause of cervical incompetence especially in this patient is obscure, abnormal cervical development including that following exposure to diethyl stiboestrol in utero has been established to play a role in others[1]. Other causes include previous dilatation and curettage and cervical tears following childbirth. Non of these could be confidently be held responsible for cervical incompetence in the presented patient. Therefore the cause in this patient is obscure.

Since definitive treatment is not there, surgical remedy which involve reinforcement of the weak cervix by McDonald's suture or Shirodkar suture will help desperate mothers like this to meet their reproductive needs.

The procedure is usually delayed until or after 14 weeks so as to allow spontaneous abortion due to foetal abnormalities, which usually occur in the first tremiseter. There is no consensus about the latest gestation age when a cerclage can be performed as this depends on the ability of the centre in handling newborns of particular gestation age. Likewise, as the pregnancy advances, surgical intervention is likely to stimulate labour[1]. Therefore most centers do not perform cerclages after gestation age of24 weeks.

This patient was referred to our centre at a gestation age of 23 weeks, which was confirmed by ultrasound. She then hesitated to have a cerclage until at 24

weeks when she was found already with a dilating cervix. This necessitated an emergency McDonald suture in order to try to keep the foetus in utero.

Although emergency cerclage is still controversial, other workers have recommended this procedure whenever there is a serious threat of early premature labour, or in the presence of cervical changes such that, a Mc Donald suture offer the only chance of prolonging the pregnancy[2,3]

Placement of McDonald's suture with bulging membranes is discouraged by some workers,[4] but promising results have been experienced by other workers who performed the procedure in pregnant women who presented with foetal membranes bulging. Some workers have recommended a knee-chest position in such patients so as to degravitate the membranes and the foetus to the fundus to enable application of the suture with less adverse outcomes[5,6]. However, despite these promising results, emergency cerclage is associated with more adverse outcomes compared to an elective one. These include infections, accidental rupture of membranes, and extensive Trauma to the cervix that may subsequently provoke contractions due to release of prostaglandins. The outcome is even poorer with bulging membranes as it was found in this patient. Careful selection of patients and meticulous surgery to avoid unnecessary trauma to the patient is therefore essential to minimize failure rates.

Bed rest, tocolysis and analgesics are important in the immediate postoperative period. Tocolysis is particularly important, as some studies have demonstrated a temporary raise in prostaglandin F1a and E2 immediately post

operative with return to basal level after 24 hours. However the role of these products is unclear.

Antibiotics prophylaxis are generally not indicated but may be indicated in a few cases especially with bulging membranes.

The mechanism of action of a cerclage in prevention of premature labour in patients with incompetent cervix is still controversial. Mechanical effect in preventing the cervix from dilating was thought to be the basic principle. However other workers have established the change in the polarity of the uterine activity towards the fundus as the mechanism of action of the suture.

More over, McDonald cerclage has also been reported to increase the cervical length significantly, as measured by transvaginal ultrasonography[7,8] which might contribute to the success of the procedure.

Delayed emergency cerclage should be considered in selected cases even after 20 weeks of gestation age. This should be particularly stressed in our set up where neonatal facilities are not capable of handling very preterm new born babies so as to offer reproductive sucsess to a few carefully selected desperate mothers.

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OB5: ABRUPTIO PLACENTA WITH INTRAUTERINE FOETAL DEATH: RESUSCITATION, AUGMENTATION OF LABOUR AND SUCCESSFUL VAGINAL EXPULSION OF THE DEAD FOETUS.

Name: Miss M.O. Primigravida

Age: 17 years

Antenatal Number: B/C

Residential address: Manzese – Dar es Salaam

Delivery number: 14500

Date of admission: 10.10.99

Date of discharge: 13.10.99

SUMMARY

Mrs. M.O. was a 17 years old primigravida who was admitted in our high risk labour ward from home at term with complaint of dull abdominal pain which started suddenly 12 hours prior to her admission. She also complained of caesation of foetal movements after that. She had no vaginal bleeding. On examination she was pale, with stable vital signs. The uterus was tense and generally tender. The foetal parts were not easily palpated and the foetal heart tones were not heard. A clinical diagnosis of a concealed abruptio placenta with intrauterine foetal death was made and labour was induced by artificial rupture of membranes and oxytocin infusion. Intravenous fluids and, blood transfusion and other supportive measures were instituted. She delivered a macerated stillbirth 12 hours later. She recovered uneventfully. The case is presented with a short commentary on the possible aetiology and the complications of abruptio placenta.

History of present illness

Until around term, Miss. M.O. was apparently well. Twelve hours prior to her admission she started experiencing an abdominal pain which was constant. The pain was initially localised above the umbilicus and latter on the pain was generalized and its intensity increased. This pain was associated with loss of foetal movements. She had neither vaginal bleeding nor draining of liquor. She had no dizziness, fainting attacks or palpitations. She complained of frontal headache with no blurring of vision or epigastric pain. She had no history of trauma prior to these symptoms.

Antenatal history

She had her last normal menstrual periods on the 7.1.99 and her calculated expected date of delivery was 14. 10 .99. She was therefore about 39 weeks of gestation. She booked antenatally at a peripheral clinic at 15 weeks of gestation. Her blood pressure was not taken at booking as well as in the subsequent visits. She weighed 48 kg on booking and the haemoglobin was 65% by Tallquist method. She had no peripheral oedema. Urine for protein was not checked. She made 7 subsequent visits and was put on irregular supplies of iron and folic acid tablets. In her last visit about 10 days prior to her admission, her haemoglobin was found to be 70%. She had no oedema of lower limbs, her weight gain was satisfactory and the fundal growth was corresponding with the gestational age.

Past obstetric history

She was nulliparous.

Gynaecological and menstrual history

She attained her menarche at 14 years of age. She had regular cycles every 28-30 days and periods lasting for 4-5 days accompanied with mild discomfort. Her menstrual flow was normal and she had no history of using contraceptives.

Past medical history

She had never been hospitalized for any illness and had never been treated for hypertension in the past. There was no history suggestive of urinary tract infection or chronic renal disease. HT

Family and social history

She was primary school leaver still staying with her parents. She was not yet married and was unemployed. Her father the only bread earner of the family, was working as a driver and had a large family to support. She had no family history of hypertension or diabetes mellitus.

General physical examination

She was in pain, fully conscious, pale and afebrile. Her temperature was 37°C with no oedema of lower limbs. She had no facial, pre sacral or ankle oedema. Her general condition was fair.

Respiratory system

Respiratory rate was 20/min bilaterally symmetrical air entry and breath sounds were heard with no added sounds.

Breasts

Well developed with no palpable lumps

Cardiovascular system

Pulse rate was 100 beats/min and of good volume. Her blood pressure was 140/100mg. The apex beat was palpable at the 4th intercostals space anterior auxiliary line. The first and second heart sounds were heard and were normal with no added sounds.

Abdomen

The abdomen was uniformly distended. Her fundal height was corresponding to 36 weeks. The abdomen was generally tense and tender therefore proper examination of the patient was difficult. The baby was in longitudinal lie but the presentation was difficult to palpate. Foetal heart tones were not heard when auscultated by Pinnard fetoscope at several points.

Diagnosis

A clinical diagnosis of a concealed abruptio placenta with intrauterine foetal death was made.

Vaginal examination

Vaginal examination was done aseptically. The vulva was healthy. There was no active bleeding and no draining. She was swabbed and catheterized aseptically and 200mls of concentrated urine drained. Digital examination revealed a thick cervix soft about 50% effaced and 1.5 cm dilated. The membranes were palpated and felt at the internal os. Amniotomy was done using Kocher's forceps. Blood stained liquor was found. There was no meconium. The vertex was presenting and was found at -2 station. The position could not be felt. The pelvis was assessed and was found to be adequate for the baby.

Management plan

1. Emergency Blood grouping and cross matching was done and 1000mls of fresh blood and 1000mls of fresh frozen plasma were requested. She was blood group A Rh (D) positive and 1000 mls of blood was made available after initial resuscitation with Ringer's lactate and normal saline infusions. She received 1500 mls of blood during labour and post delivery.
2. Two wide bore (16G) canullae were inserted on the antecubital veins. On one arm, infusions (Ringers lactate and Normal saline) were started for resuscitation 2L were started fast and then the other infusions left to run at a rate of 60 drops per minute while awaiting blood.
3. On the other arm, another drip of one litre of Dextrose saline was set up and 10 i.u. of Oxytocin was added in, and titrated at a rate of10,20,30,40,50, up to 60 drops per minute. The rate was changed after every 15 minutes.
4. A bedside clotting time was performed and found to be not clotting after 15 minutes. Platelet count was done and found to be $350x10^9/L$ and Fibrinogen levels were 110 mg/dl. Fibrin degradation products were not estimated and follow up of platelet count, and fibrinogen levels could not be done due to technical problems.
5. An injection of pethidine 100mg was given intramuscularly to relieve pain and alley anxiety.

6. An indwelling urethral catheter was inserted aseptically and urinary output monitored throughout and had an average output of about 120 mls per hour, which is satisfactory.
7. Vaginal bleeding was monitored and the degree of pallor was compared with the amount of blood loss and revealed significant discrepancy.
8. Blood pressure and pulse rate were monitored after every 30 minutes and it was ranging between 130/70 and 140/100 mmHg.

Progress of labour

Four hours after initial vaginal examination, vaginal examination was repeated, the cervix was found to be fully effaced and 2cm dilated. The position was left occipital anterior the vertex was at station 0. There was no caput or wounding. Labour was diagnosed to be slow and oxytocin was stepped up to 15 i.u. in 1000 mls of Dextrose saline and to continue with titrations as above.

Four hours after the second assessment she was re examined and the contractions had picked up. The cervix was found to be fully effaced and was 6 cm dilated. There was no caput and no moulding. She was ordered to continue with oxytocin and spontaneous vertex delivery was anticipated.

Four hours latter she was having a strong urge to push. She was encouraged to do so. She delivered a 2.5 kg female macerated stillbirth. Active management of the third stage of labour was employed. The placenta was weighing 400gms and was delivered spontaneously followed by delivery of a retro placenta clot, which covered about 75% of the maternal surface of the placenta. The retro placental clot was estimated to be 350 grams (700mls).

This made a total estimated blood loss of 1200 mls. The uterus contracted effectively and there was no more active bleeding. She received one unit of fresh blood post delivery. She was observed in the labour ward for 24 hours. Her blood pressure was 140/100 mmHg immediately post delivery but latter on settled at arround 130/70 mmHg. She developed fever with non foul smelling lochia. A blood slide for malaria parasites was positive and she was given 3 tablets of Fansidar and Paracetamol. She produced about 2800 mls of urine against intake of 5000mls of fluids. Intravenous fluids were discontinued and the catheter removed. She was transferred to the postnatal ward for further observation. She was kept on Methyl dopa 250 mg 8 hourly and haematinics .On the third day post delivery her haemoglobin was found to be 8.1 g/dl. Her serum creatinine was 88mmol/L, she was discharged home on Ferrous sulphate, folic acid, and Methyl dopa while in good health and was advised to attend at the post natal clinic after six weeks.

Follow up

She was seen again 6 weeks post delivery. She was well. Her haemoglobin was 9.9g/gl and her blood pressure was 110/70 mmHg. Her uterus had involuted completely and there was no abnormal vaginal discharge. She was discharged from postnatal clinic after she was advised about family planning.

COMMENTARY

Abruptio placenta or placenta abruption is a recognized serious obstetric emergency, contributing, significantly to maternal and perinatal morbidity and mortality. It occurs in 1% of pregnancies. In developed world it accounts for 15-25% of all perinatal morbidity[1]. It is the commonest cause of fresh still

birth recognized at Muhimbili Medical Centre and during year 1991 it accounted for 6.31% of maternal deaths[2]. The condition is said to be initiated by haemorrhage in the decidua basalis, which then splits it and blood accumulates to form haematoma which expands, stretches and and disrupts more vessels and separate more the placenta from the deciduas.

The primary cause of abruption placenta is unknown but several conditions have been found to be associated with this condition. These include advanced age, high parity, abdominal trauma, sudden decompression of polyhydramnious and external cephalic versions. Hypertensive diseases of pregnancy, drug abuse including cigarette smoking, short cord, congenital weakness of elastic lamina of placenta vessels, have also been found to be associated. Nutritional deficiency especially of Ascorbic Acid and Folic Acid have also been found by some authors to be associated with abruptio placenta but disputed by others[3]. Malaria parasitasation of the placenta and poor placentation have also been associated. With the exception of her borderline haemoglobin which could suggest nutritional deficiency, no other factor which could conclusively be held responsible for the aetiology of abruptio placenta in the presented patient.

The diagnosis of this condition is most of the times simple from history and physical examination. However with concealed haemorrhage as seen in this patient the condition might be over looked, and lead to late presentation as it was observed in this patient.

After the diagnosis is made the institution of timely and correct management of this condition makes a difference between life and death. With moderate to

severe abruptio placenta which has lasted for more than 12 hours with an established intrauterine foetal death, maternal resuscitation is the priority. This is particularly so when dealing with a concealed abruption placenta where the estimation of the bleeding cannot be obviously made, and is much more complicated in a patient who had a pre-existing anaemia like in the presented case.

A wide bore canula with generous infusions with crystalloids ideally 3 x the blood loss should be instituted. Due to release of vasoactive substance such as prostaglandins, endothilins, and catecholamines as a response to Sudden reduction in circulatory volume, the blood pressure measured from the peripheral is occasionally misleadingly high and this should not be relied upon when resuscitating the patient. The central venous pressure monitoring would have been ideal in this patient. In circumstances where central venous pressure monitoring are lacking an indwelling urethral Catheter with monitoring of amount of urine, concentrations and colour against the input is another method of ensuring tissue perfusion. This is what was done in this patient.

Defects in blood clothing occur at least in 10% of cases of abruptio placenta, and in 38% of abruptio placenta in which the foetus is dead[4]. This is a result of consumptive coagulopathy which latter on lead to disseminated intravascular coagulopathy from the retroplacental clot and injured decidua. This is the most lethal complication in this condition. In this patient this condition was probably worsened by its concealed nature and compounded by foetal maceration. This should be treated prior to delivery as

complications such postpartum haemorrhage and renal failure are a result of this. In this situation availability of fresh blood or whole blood with fresh frozen plasma, cryoprecipitates so as to replenish the clotting factors is of vital importance. Blood transfusion is mandatory when the patient has lost more than 20% of the circulatory volume and much more important when the patient has borderline haemoglobin like this one. In this patient assessment of blood loss was only by the degree of pallor and its progression.

Prompt delivery is advised in all patients with abruption placenta. With a live foetus rapid delivery of a distressed foetus practically always means caesarean section. But with a dead foetus like in this patient vaginal delivery is preferred, unless there are other obstetric complications[5]. Early Amniotomy and administration of oxytocin infusion were instituted to accelerate labour, and vaginal delivery achieved.

The laboratory has an important role in following up the patient during the course of labour as the baseline haemoglonbin of the patient, Prothrombin time, partial thromboplastin time, Fibrinogen levels, Fibrin degradation products and platelets estimation are important in patient management. However their performance are time consuming, which may allow changes to occur without recognition and mislead the attending physician.

Analgesics (preferably opiates) are important to alleviate pain. Use of epidural anaesthesia for pain relief is uncommon in moderate to severe abruption, as epidural haemorrhages may occur when coagulopathy has set in.

In conclusions although the aetiology of abruptio placenta is still unknown, maternal mortality and morbidity can be significantly improved with correct

recognition of the problem prompt hospitalization, liberal fluid therapy including blood, correction of coagulopathy and other complications and prompt delivery of the patient.

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OB6: INTRAPARTUM ECLAMPSIA: MANAGEMENT OF LABOUR AND SUCCESSFUL VAGINAL DELIVERY:

Name: Miss R.R.

Age: 20 years

Antenatal Number: 073/99

Residential address: Mwananyamala – Dar es Salaam

Delivery number: 08677

Date of admission: 17.6.99

Date of discharge: 30.6.99

SUMAMRY

Miss R.R. was a 20 years old primigravida who was referred to our high risk labour ward due to eclamptic fits which occured twice at a peripheral hospital. She was immediately transferred but she had another fit on her way to this center. On admission she was found to be semiconscious, with a blood pressure of 160/94 mmHg but with no oedema. She had moderate regular uterine contractions. The foetal heart tones were present and were found to be regular and normal. Proteinuria was ++. The diagnosis of intrapartum eclampsia was made and the patient admitted to intensive care room of our labour ward. Supportive treatment was given and convulsions were controlled. Labour was augmented and she had a successful vaginal delivery of a live male foetus weighing 2.9 kg and Apgar score of 7 and 9 at one and five minutes respectively. She had a good recovery and was discharged home twelve days latter with her baby both in good condition.The case is presented with a short commentary on management of eclampsia.

History presenting illness

Miss R.R. was a primigravida and was admitted in the evening of 7th June 1999 as referred patient from a peripheral hospital where she was admitted with history of labour pains. This was shortly followed by twitches and then tonic clonic seizures and there after loss of consciousness. There was no frothing but there were extensive tongue biting. She experienced two similar episodes while at peripheral hospital and these were controlled by intermittent injections of diazepam. She was immediately referred to our high risk labour ward with an escort nurse but on her way she experienced a third attack. The patient had no fever. The history of epilepsy in her and other members of the family was denied.

Antenatal history

She started her last normal menstrual period on the 17th October 98 and her calculated date of delivery was 23.7.99. She was therefore about 35 weeks of gestation. She first booked at peripheral antenatal clinic at 20 weeks of gestation. Her weight was 55 kilograms but her blood pressure and albumin in urine were not checked. The uterine fundus was 20 weeks corresponding well with her dates. Her haemoglobin was 70%. She had no edema of lower limbs. Her blood group was not known and she was not screened for syphilis. She made only one subsequent visit that was ten days before her admission and on this visit her weight and blood pressure were not checked. Her haemoglobin was still 70% and she had no oedema of the legs sacrum or face. Proteinuria was again not checked. Her uterine fundus was 34 weeks corresponding with the gestational age by dates. During her two visits she

received only tetanus toxoid. She did not receive Ferrous sulphate, folic acid or anti malaria prophylaxis.

Obstetric history

She was a Primigravida

Menstrual and gynaecological history

She had her menarche at 15 years of age. She used to have regular cycles of 28-30 days and painless periods of 4-5 days and of normal flow. She had never been on any method of contraception.

Past medical history

She had no any history of major illness in the past and had no history of comvulsions or any serious accident involving the head.

Social and family history

She was single and was still living with her parents. She was a primary school leaver. There was not history of epilepsy in the family or the patient her self. There was no history of hypertension or renal disease for herself or other close members of the family. She did not smoke cigarettes and did not drink alcohol.

General physical examination

The patient was semi conscious. She was not pale, not cyanosed and not jaundiced. There was no evidence of recent trauma on the head. However there was evidence of tongue biting following the eclamptic fits. She had no paedal oedema and had no enlarged peripheral lymph nodes.

Respiratory system

There were symmetrical chest movements and air entry was bilaterally symmetrical and normal. Breath sounds were vesicular and there were no rhonchi or crepitations.

Cardiovascular system

The pulse rate was 110/min good volume and regular. The blood pressure was 160/94 mmHg, The jugular venous pressure was normal there was no cardiomegally and the heart sounds were heard and they were normal with no murmurs.

Central nervous system

The patient was semiconscious. There was no neck stiffness and the Kernig's sign was negative. The deep tendon reflexes were brisky bilaterally in both upper and lower limbs. The pupils were normal and had a normal response to light. Fundoscopy revealed normal optic fundi bilaterally. There was no evidence of arteriovenous nipping. There was no exudate, haemorrhage or papilloedema.

Abdominal examination

The abdomen was uniformly distended and was moving with respiration. There were no therapeutic or surgical scars. There was no area of tenderness. The spleen liver and Kidneys were not palpably enlarged. The uterine fundal height was equivalent to 34 weeks. She had moderate uterine contractions. The foetus was palpated in longitudinal lie with cephalic presentation. The level was 4/5. The baby size estimated to be 2.8 kg. The foetal heart sounds were heard at a rate of 140 beats per minute and they were regular.

Vaginal examination

Vaginal examination was done aseptically. The vulva was inspected and it looked normal with minimal show. The cervix was found to be fully effaced and 4 cm dilated. The vertex was presenting and the position was left occipito anterior. There was no moulding and no caput. The membranes were ruptured using a Kocher's forceps and clear liquor drained. The cord was not felt. The pelvis was found to be adequate.

Diagnosis

Intrapartum eclampsia at 35 weeks.

Plan of management

1. Control of convulsions and prevent development of further convulsions.
2. Control of the blood pressure.
3. Provision of supportive treatment.
4. Performance of baseline investigations.
5. Prompt delivery of the patient.

1.Control and prevention of further fits

The patient received 20mg of Diazepam intravenously on admission and 20 mg was repeated 6 hourly or whenever the patient fitted again. The patient continued to have wide spaced sporadic fits at an interval of about one hour between each fit despite this management. She had two episodes of fits before they were completely controlled.

2. Control of the blood pressure

On admission the blood pressure was 160/94 mmHg but with sedation the blood pressure went down to about 140/90 mmHg. She was prescribed 10

mg of hydralazine injection whenever her diastolic blood pressure was 110 mmHg or more but this was not given as her blood pressure fell soon after admission.

3.Supportive treatment

- Indwelling urethral catheter was introduced and left insitu for continuous bladder drainage and also enable output monitoring.
- Blood pressure, pulse rate, temperature and respiration were monitored hourly.
- An air way was inserted in the mouth to ensure the airway is patent and clear, oropharyngeal suction was done when need arose.
- The patient was nursed in semi prone position and was turned after every 2 hours.
- Injection Ampicillin 500mg was given 8 hourly for the first 48 hours and then capsules Ampicillin 500 mg 8 hourly for 5 days.

Baseline investigations and results

1. Haemoglobin was 8.8 g/dl
2. Blood slide for malaria parasites was negative.
3. Serum creatinine was 68umol/L
4. Blood urea (taken post delivery) was 3.2 mmol/L
5. Serum electrolytes were not estimated due to technical problems.
6. Blood group 0 Rhesus D Positive
7. Random blood glucose was 5.2 mmol/L
8. Urine albumin was ++

Delivery of the baby

Labour was augmented by oxytocin 10 i.u in 1000mls of Dextrose saline and was titrated at rate of 10,20,30,40,50,60 drops per minute and the rate was changed after every 10 minutes. The contractions strengthened progressively. The second stage was assisted by a low cavity vacuum extraction.

Progress of labour

4 hours after initiation of augmentation, the patient was well sedated. The blood pressure was maintained between 150/90 – 140/90 mmHg. At this juncture the cervix was fully effaced and 7 cm dilated. The level of the head was 3/5 and there was no caput or moulding. There were 3 contraction every 10 minutes each lasting between 20 and 40 seconds. Proteinuria was ++. She remained afebrile and well sedated. Urine output was of average of 40mls per hour and was clear and was considered adequate.

4 hours after the second assessment she was approaching second stage but the head was still at station 0. She was given another one hour to allow descent of the presenting part so as a vacuum extraction would be applied. She was then put in lithotomy position, and vulvo-perineal preparation done. She was draped in sterile linen and the procedure was carried out under sterile condition as described in Obstetric case no 2.

Ergometrine was purposely avoided in this patient, instead the patient continued with oxytocin drip at a rate of 60 drops per minute. The placenta and membranes were delivered completely by controlled cord traction. The episiotomy was immediately repaired while the baby was being taken care by the assistant as described in obstetric case No 2. The mother developed a mild primary PPH due to transient uterine atony and from the episiotomy.

Estimated blood loss was 600mls.This was treated by intravenous infusions of crystalloids and 10 mg of bolus oxytocin.

The baby

A male baby weighing 2.9 kg was delivered with Apgar score 7 at 1 minute and 9 at 5 minutes. There was no obvious congenital malformation. The baby was taken to neonatal ward for care.

Progress in the ward

She had a prolonged period of sedation despite discontinuation of sedation. She then developed foul smelling secretions from the oral cavity which was managed by antibiotics (Ampicillin and Metronidazole). From the second post delivery day she started improving her condition with progressive improvement of her level of sensorium. On the third day she was fully awake and the blood pressure was falling well. She was put on Methyldopa 250 mg 8 hourly until discharge. However she developed fever and a blood slide for malaria parasite was found to be positive. She was started on Chloroquine Injections (200mg 8 hourly for 24 hrs) then tablets 600mg and 300mg on the second and third day respectively. She was also given Paracetamol tablets. This was followed by smooth recovery. She was discharged home on the twelfth day post delivery in good general condition. Her Heamoglobin at discharge was 8.9g/dl and her blood pressure was 130/90 mmHg. She was to continue using oral Iron and folic acid tablets which she had started while in the ward.

Postnatal follow up

She was reviewed 6 weeks post delivery at the postnatal clinic. She was found to be healthy with haemoglobin of 10.8g/dl. Her blood pressure was

120/70 mmHg. She had no oedema and had no proteinuria. The baby was also doing well. She was counseled on family planning and advised to continue taking her child to a near by maternal and child health clinic for vaccinations and growth monitoring.

COMMENTARY

Although the number of women developing hypertension in pregnancy remains around 10% in developed world, the incidence of the major complications of hypertensive diseases in pregnancy has fallen markedly over the past 60 years. This is particularly true of eclampsia whose incidence is now 4.9/10,000 deliveries in the United Kingdom[1] Conversely eclampsia still remains a very significant cause of maternal deaths in developing world particularly in Africa[2]. One of the reasons for this is the high frequency of patients who have multiple fits before arrival at hospital. In a recent study done in South Africa, 19% of all maternal deaths were caused by eclampsia[2]. Eclampsia is associated with a number of complications such as acute renal failure, cerebrovascular accidents pulmonary oedema, cerebral oedema and infections. Maternal and perinatal deaths are also relatively high. It occurs as a complication of pre eclampsia or super imposed pre eclampsia and therefore considered to be a failure of antenatal care. It is characteristised by generalized tonic clonic seizures followed by altered level of consciousness.

As observed in this patient, it is most common in the last tremister and becomes increasingly more frequent towards term. Proper management is to prevent its occurrence but this failed due to her poor antenatal attendance and improper follow up during antenatal period.

Studies at this center have shown that contribution of eclampsia in maternal morbidity has increased from 3.1 per 1000 deliveries in 1978 to 24.23 per 1000 deliveries in 1999[3]. Although case fatality has shown to decline, it still contributes significantly to maternal and perinatal mortality. In the most recent study it has shown to contribute up to 17.5% of all maternal deaths and perinatal death in this subgroup was 34.4 percent[3].

Management of eclampsia needs to be very well planned with proper prioritisation of management aspects.

Since maternal risk is directly proportional to the total number of fits[2], the control of fits remains the most important aspect in management of eclamptic patients. Diazepam injections were used to treat fits in this patient. However, she still continued to have sporadic episodes of fits before they were controlled completely. Diazepam is efficient in controlling fits but it is short acting and does not offer prophylaxis for fits, which are likely to recur. Although magnesium sulphate has been used in Obstetrics since 1906, the choice of MgSo4 for seizures prophylaxis has continued to vary enormously. In the United States, for example MgS04 is the anticonvulsant of choice for women with eclampsia, while in the United Kingdom, in 1992 it was used by only 2% of Obstetricians[4]. The collaborative Eclampsia trial has now provided unrefutable evidence of superiority of MgS04 when compared with diazepam and phenytoin in the prevention of recurrent seizures in women with eclampsia[2]. Other recent studies also support this[5,6,7]. It has also been found to be cost effective as it can be prepared locally. Other scientists have implicated Mg SO4 to be associated with increased length of labour, cesarean section rate, postpartum bleeding, respiration depression and maternal death

from overdose. Locally available data by studying the effects of these anticonvulsants may help each centre to choose the correct anticonvulsant regimen for its population. Adoption of MgS04 as anticonvulsant of choices in eclamptic patients should go alongside with the knowledge of its pharmacology and prevention of toxic effects[4].

Management of airway is very important. Proper positioning, checking of the airway and suction of the patient's secretions or vomitus after an attack of fit is important and a left lateral position is advocated to avoid aspiration and supine hypotensive syndrome[2].

Control of blood pressure in this patient was adequately achieved by sedation and Methyldopa on which she, responded well until it was discontinued at discharge. Hydralazine is accepted as the drug of choice in the treatment severe hypertensive diseases in pregnancy. However it was not indicated in this patient Diastolic blood pressure has to be maintained above 90mmHg before delivery so as to ensure adequate placenta perfusion but should not be allowed to go above 110 mmHg in order to avoid other complications. Post delivery the blood pressure may may be allowed to fall further. Diuretics are purposely avoided before delivery to avoid further compromisation of placental perfusion by depleting the circulating volume.

Supportive therapy in form of fluids especially crystalloids or Dextrose saline are advised at a rate of 60 to 125 millilitres per hour unless there is unusual fluid loss[8]. This is because these patients have generally contracted circulatory volume despite their high blood pressure. The presented patient needed even more fluids postdelivery as she developed a mild primary postpartum haemorrhage. Excessive fluid therapy, appreciably increase the

risk of pulmonary and cerebral oedema by enhancing the mal-distribution of extracellular fluid compartment[8]. Provision of osmotic diuretics may be indicated when severe cerebral oedema is suspected. However this is still an area of controverse as other obstetricians donot recommend.

Adequate analgesia and sedation are important aspects of management during labour. Pethidine was prescribed and given in this patient.

Delivery of the mother has to be effected as soon as the maternal condition is stabilised. Mode of delivery usually depends on maternal condition, foetal condition and the state of the cervix. The main maternal condition considered is the level of consciousness, which is batter assessed 1-2 hours post admission or after an attack of a fit. Minority of patients, remain unconscious or remain restless, usually due to multiple fits and may have lateralising signs. Fortunatelly no lateralizing sings were observed in this patient. However she presented with prolonged period of subconsciousness, which suggest significant cerebral oedema as a result of repeated fits.

The best time for delivery recommended is 2 to 4 hours after admission. As a guide, 12 hours induction to delivery interval is the recommended maximum interval unless the patient is fully conscious when it can be extended[2]. To achieve this augmentation of labour is most of the times necessary. Assisted second stage is advocated especially in unconscious, semiconscious or restless patient as they are uncooperative during second stage of labour.

Due to prolonged period of unconsciousness, infections are common especially hypostatic pneumonia. These should be dealt with accordingly.

In conclusion proper management of eclampsia remain an important tool of any obstetrician, especially who practices in developing world in order to

reduce severe maternal and perinatal morbidity and mortality associated with this serious and life threatening obstetric condition.

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OB7: PREVIOUS LOWER SEGMENT CAESAREAN SECTION SCAR: TRIAL OF SCAR AND SUCCESSFUL VAGINAL DELIVERY AT TERM.

Name: Mrs. S.M. Gravida 2 para 1

Age: 27 years

Antenatal number: 29/99

Residential address: Tabata-Dar es Salaam.

Delivery number: 05641

Date of admission: 24.4.99

Date of discharge: 25.4.99

SUMMARY

Mrs. S.M. was Gravida 2 para 1 who was admitted in our high risk labour ward from home at 40 weeks of gestation while already in the active phase of labour. Her previous delivery was by a lower segment cesarean sections due to a big baby, of which she had a smooth recovery with no complication. On arrival she had a thorough assessment and the baby size was estimated to be 3.3kg. her pelvis was assessed and found to be adequate for the baby and there was no other risk factor. A trial of scar was planned. She had a successful vaginal delivery of a female baby weighing 3.5 kg and apgar score 8 and 10 at 1 and 5 minutes respectively. Her immediate postnatal period was uneventful. The case is presented and a commentary on management of pregnancy with previous caesarean section with its short -comings in our day to day practice.

History of labour

Mrs. S.M. was admitted in our labour ward on 24th April, 1999 at 1130 hrs due to labour pains which had started about 2 hours before. She was in her

40th week of gestation. The pain was progressively increasing in intensity but she was not draining liquor and she had no vaginal bleeding. The foetal movements were felt normally.

Past obstetric history

She was gravida 2 Para 1 with one living child who was delivered in 1994. She gave a history of prolonged labour in her first pregnancy, which lasted for about 20 hours. This was followed by a decision to deliver her by caesarean section. She was delivered of a male baby weighing 4.1 kg who was in good condition. The patient had a smooth puerperium with no fever and no abnormally foul smelling lochia or secondary postpartum haemorrhage. Her abdominal wound healed well with no complications. She was discharged from hospital on the seventh day after the stitches were removed and the rest of her puerperal period was uneventful.

Antenatal history

She booked at antenatal clinic at a peripheral MCH clinic at a gestation age of 22 weeks. Her last normal menstrual period was on 13th July 1998 and therefore her estimated expected date of delivery was on 20th April 1999. Her booking weight was 65 kg and she measured 164 cm in height. Her heamoglobin was 78% and her blood pressure was 110/60 mmHg. She had no paedal oedema but proteinuria was not checked. The fundal height was corresponding with her gestational age. She made four more visits. During all these visits the fundal height was corresponding well with the gestation age, however she was putting very little weight (she only gained 1 kg between booking and the last visit) and there was no identifiable reason for this. Her haemoglobin was progressively falling and her last haemoglobin was 70%.

Her blood pressure was ranging between 110/60 and 120/80 mmHg throughout her antenatal period. Her blood group was not determined and VDRL was not checked. She received two doses of tetanus toxoid vaccine, iron tablets were provided but folic acid and chloroquine tablets were not given. At the peripheral clinic she was advised to come to this high risk centre for delivery when labour started and therefore she waited until labour pains started when she presented herself to this high risk labour ward. The pelvic assessment had not been done and so was the plan of the mode of delivery. By the time she presented to the labour ward she was already in established labour. She gave no history of draining liquor or vaginal bleeding

Gynaecological and menstrual history

She had her menarche at 15 years of age and she had regular cycles every 28 to 30 days with painless periods of 3 to 4 days and of normal flow. She had never been on any method of contraception.

Past medical history

She had no history of serious illness in the past. This was her second time she is hospitalised, the first one being that of her first caesarean delivery.

Family and social history

She was a housewife, married to a petty businessman. She was occasionally drinking alcohol but did not smoke. There was no known history of diabetes mellitus or hypertension in the family.

General physical examination

Mrs. S.M. was a young woman afebrile, not pale, not jaundiced and was of good nutritional status. There was no oedema of the lower limbs.

Respiratory system

She had spontaneous normal respiration with normal vesicular breath sounds and no added sounds.

Cardiovascular system:

Pulse rate was 90 beats per minute, regular and of good volume. The blood pressure was 120/70 mmHg. The heart sounds were heard normally and there was no murmur.

Abdomen

The abdomen was uniformly distended. There was a sub umbilical midline incisional scar that had healed by primary intention. The liver and spleen were not palpably enlarged and the renal angles were not tender. The uterine fundus was equivalent to 36 weeks of pregnancy and was corresponding with the gestational age. There were moderate contractions. The foetal lie was longitudinal with cephalic presentation. The foetal size was estimated to be 3.3 kg. Three fifths of the foetal head was still palpable above the true pelvic inlet and the head was found to be well flexed. The foetal heart tones were 142 per minute and were regular.

Vaginal examination

The vulva and vagina were normal and there was no draining of liquor. However there was show at the vulva. The cervix was fully effaced and was 4 cm dilated. The membranes were felt with no cord presentation. Artificial rupture of membranes was done the liquor was clear and there was no cord felt. The vertex was presenting with left occipito anterior position. There was no moulding or caput. The sacral promontory was not reached, the sacral curve was normal concave and the ischial spines were not prominent. The

presenting part was at –3 station and the subpubic arch was wide enough and normal. The intertuberous distance was accommodating 4 knuckles and therefore the pelvis was estimated to be adequate for the foetus.

Diagnosis

Pregnancy with previous caesarean section scar, in active labour.

Plan of management

A trial of caesarean scar was decided.

1. Haemoglobin was 70%
2. Blood group was 0 Rhesus (D) Positive.
3. 1000mls of crossmatched blood were reserved.
4. The urine analysis was negative for sugar and protein
5. Intravenous drip of 5% Dextrose 1000 mls was set up and left to run slowly and she was started on a partogram for proper monitoring.
6. Blood pressure, Pulse rate and foetal heart sounds were closely monitored and any scar tenderness, vaginal bleeding or meconeum stained liquor was closely watched for.
7. She was prepared as for caesarean section.
8. She was instructed not to take anything orally.

Progress

Labour was allowed to proceed naturally. The maternal and foetal heart rates were recorded half hourly and so was the palpation for scar tenderness. The contractions strengthened and labour progressed well. Maternal pulse rate, blood pressure were taken half hourly and were normal. After 4 hours the contractions were strong at a frequency of 3 contractions per 10 minutes with contractions lasting more than 40 seconds. There was no scar

tenderness and the foetal heart beats were heard at a rate of 136 beats per minute and were regular. Vaginal re-assessment was done and the cervix was fully effaced, and was 8 cm dilated the position was left occipito anterior with a well flexed head. There was no moulding and no caput. The presenting part was found to be at station 0. There was no scar tenderness and maternal and foetal conditions remained good. An hour latter the patient developed a strong urge to bear down and she was encouraged to do so. The head was crowning. The perineum was cleaned with antiseptic solution and a left mediolateral episiotomy was performed as follows:- Incisions site was infiltrated with 1% solution of lignocaine. With the presenting part stretching the perineum, the middle and index fingers were inserted between the presenting part and the already stretched perineum at the fourchete. One blade of the Mayo pair of scissors was inserted and an incision made at 5.00 o'clock position and deepened to involve the superficial transverse perineal muscles, care being taken to avoid injury to the rectum. She had a normal delivery. Ergometrine 0.5 mg was given intravenously immediately after the birth of the baby. The placenta and membranes were delivered completely by Brandt-Andrews maneuver. Vaginal examination was then done. There was no vaginal or cervical tears. The uterine cavity was then carefully and gently explored and there was no vent palpable. The episiotomy was immediately repared as follows: The patient was positioned in lithotomy on a high bed. Perineum cleaned and sterile linen applied. The episiotomy was exposed and starting at the apex of the incision in the posterior wall of the vagina, a series of interrupted chromic cut gut sutures No O were placed up to the mucocutaneous junction at the introitus. The perineal muscles were repaired

with continuous stitches of catgut No 0 and the perineal skin repaired with interrupted stitches of catgut No 0. The estimated blood loss was 120 mls.

The baby

The female baby weighing 3.5 kg and apgar score of 8 at first minute and 10 at five minutes was delivered. She was fully examined and had no any congenital malformation. The Moro, and sucking reflexes were normal. She was given BCG and polio vaccines before discharge. They were discharged home and advised to come to the postnatal clinic after 6 weeks.

Follow up

They were seen again 6 weeks later. Both the mother and the baby were doing well. Her blood pressure was normal and haemoglobin was 11 g/dl. The infant weighed 5 kg and looked healthy. She was counselled on family planning and instructed to continue attending the nearest MCH clinic for contraception and care of the under fives. She was also instructed to book early at high risk antenatal clinic for her next pregnancy.

COMMENTARY

Vaginal birth or trial scar after previous caesarean delivery represents one of the significant changes in obstetrics practice. However the management of labour in women with previous uterine scar is a high risk[2]. There are numerous reasons that influence the decision to proceed with trial of scar after a previous caesarean delivery.

Although a trial of scar is encouraged in the majority of women with previous caesarean delivery in the developed world and other places where cephalopelvic disproportion is not common[2], the decision of doing a trial of

scar in an area like ours where cephalopelvic disproportion is the commonest indication of caesarean delivery has to be done after careful assessment. This is best done antenataly although sometimes this may not be so and therefore a patient presents with a previous caesarean section scar already in well established labour like this patient.

Towards term (at 36 weeks) estimation of the weight of the baby and pelvic assessment is done and subsequent plan of mode of delivery made. All this is to ensure that no additional risk factor is encountered during the trial of scar so as to make the trial of scar as safe as possible.

In the unfortunate event as what happened to Mrs S.M where all the above plans are not made, a physician should take a relevant history regarding her previous caesarean section, antenatal history and a thorough physical examination in order to exclude absolute contraindications for vaginal delivery[2]. This is what was done in the presented patient.

Although trial of scar is potentially dangerous and particularly so when decided on emergency basis as what was done to Mrs. S.M., this should be considered along side with the risk of caesarean section especially in our low socioeconomic set up.

This patient had a 4.1kg baby in her first delivery, which was above average birth weight, and caesarean section was done due to a big baby obviously leading to cephalopelvic disproportion. This is considered by most obstetricians to be a recurrent indication for caesarean section[2]. However, if the next baby is considered to be of average weight like in this patient spontaneous vertex delivery should be possible. Other obstetricians have found that strictly defined, diagnosing multiparous cephalopelvic

disproportion should not constitute an automatic "recurrent" indication for elective delivery as 68% of such patients had successful vaginal deliveries in their next pregnancies[3].

In a patient like this proper intrapartum management with a partograph reimains one single tool that will ensure adequate follow up of progress of labour, maternal and foetal wellbeing during labour. In women undergoing a trial of scar following caesarean sections the partographic zone 2-3hours after the alert line represent a time of high risk of scar rupture. In such patients, an action line in this zone will probably help to reduce the rupture rate without an unacceptable increase in rate of caesarean section[4]. Mrs. S.M. was closely monitored and her labor followed a normogram which is ideal for such patients.

Other obstetricians are thinking of extending trial of scar to other conditions, which are currently absolutely contraindicated such as twin pregnancies, breech presentations and macrosomic infants[5]. Similarly other obstetricians are advocating trial of scar in two or three previous cesarean deliveries[6]. This is thought to be dangerous practice by the author and should not be recommended in our set up with too many patients to be monitored. Experience in this center has shown that such practice is associated with uterine ruptures especially during second stage of labour. In conclusion close intrapartum management is warranted in patients undergoing trial of scar. The risks and benefits of trial of scar should be weighed and obstetric management should be individualised depending on the circumstances sorrounding the individual parturient.

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OB8: BREECH PRESENTATION IN A PRIMIGRAVIDA: DELIVERED BY ASSISTED BREECH DELIVERY.

Name: Mrs. S.S.

Age: 20 years

Antenatal Number: 103/98

Residential address: Mikocheni A- Dar es Salaam.

Delivery number: 13354

Date of admission: 02.11.98

Date of discharge: 04.11.98

SUMMARY

Mrs. S.S. was a 20 years old primigravida who was referred from a peripheral clinic on account of persistent breech presentation at 34 weeks. An ultrasound done at 36 weeks confirmed a persistent breech presentation and the placenta was found to be fundal. No any other mass was found in the pelvis. Pelvic assessment was done and foetal weight estimated at 36 weeks and assisted breech delivery planned. At 39 weeks of gestation she was admitted in our labour ward complaining of labour pains accompanied with draining. On examination she was found to be in good general condition and with moderate contractions. The baby size was estimated to be 3.0kg. Pelvic examination revealed profuse draining of liquor and early active labour. The pelvis was found to be adequate. Assisted breech delivery was planned. She delivered a 3.1kg male baby with good apgar score. Both mother and child were discharged on the next day in good condition. Assisted breech delivery in primigravida is presented and discussed.

Antenatal history

Mrs. S.S. was 20 years old primigravida referred to our high risk antenatal clinic from a peripheral clinic due to persistent breech presentation at 34 weeks of gestation. She had her last normal menstrual period on 27.02.98 and therefore her calculated estimated date of delivery was on 6th November 1998.

She booked at peripheral clinic at 24 weeks of gestation. On booking her blood pressure was 120/70 mmHg and her heamoglobin was estimated to be 75%. Her weight was 58kg. She made three subsequent visits at the peripheral clinic and remained normotensive and did not develop peripheral oedema. She received 2 tetanus toxoid vaccinations at peripheral clinic. In her last visit at peripheral clinic she was found to have a breech presentation and therefore immediately referred to our high risk antenatal clinic.

She made 3 other visits at our high risk clinic, the last one being 6 days prior to her admission in the labour ward. Her height was 160 cm and her weight was increasing well. She had no history of vaginal bleeding since conception. An obstetric ultrasound was requested and was performed at 36 weeks. It confirmed a persistent breech and there was no any other pelvic mass noted and the placenta was found to be fundal. The baby's weight was estimated to be 3kg. Pelvic assessment was also done at this time. The sacral promontory was not reached, sacral curve was normal concave and ischial spines were normal blunt and short. The subpubic arch was wide and intertuberous distance could accommodate 4 knukles. This was considered to be adequate for the baby. External cephalic version was not attempted as the author does not believe in it and is not routinely done at this center. Assisted breech

delivery was planned for this patient when labour started. In her last visit her haemoglobin was 10.8g/dL.

Menstrual and gynaecological history

She attained her menarche at 15 years of age and had regular cycles of 30 days with periods lasting for 5 days. She had never used any contraceptives.

Past medical history

Unremarkable.

Family and social history

This patient was a housewife, married to a petty trader. There was no personal or family history of diabetic mellitus or hypertension. There was no family history of twins.

Labour history

She started true labour while in our antenatal ward where she was admitted with a diagnosis of false labour. She started experiencing intermittent colicky pains accompanied with draining of liquor.

On arrival in the labour ward she was immediately assessed. She was found to be in pain that was intermittent accompanied with profuse draining of liquor.

Physical examination

She was a healthy woman with good condition. She was 160cm tall. She was not pale not jaundiced and afebrile with temperature of 37^{0}C. She had no peripheral oedema. The pulse rate was 90 beats/minute of normal volume and regular. The blood pressure was 110/70mmHg. The heart sounds were normal and the lung fields were clear.

Abdomen

The abdomen was enlarged uniformly. She had a fundal height of 36 weeks of gestation. The baby was in longitudinal lie with breech presentation. The foetal head was felt at the fundus and was found to be well flexed. She had moderate contractions every 5 minutes lasting between 20 and 40 seconds. Estimation of the foetal weight was done again and was estimated to be 3.0 kg. The foetal heart sounds were 138 per minute and were regular. The liver spleen and kidneys were not palpably enlarged.

Vaginal examination

The initial vaginal examination was done. The vulva and vagina were normal, there was clear liquor with vernix caseosa at the vulva and there was no bleeding. The cervix was found to be fully effaced and 4 cm dilated. The breech was presenting with left sacro anterior position. The membranes were not felt and there was no cord prolapse. The pelvis was reassessed and was found to be adequate for the baby (sacral promontory was not reached, sacral curve normal concave, The ischial spines blunt and short, the subpubic angle wide enough and the intertuberous distance could accommodate 4 knucles). The breech was felt just above the level of the ischial spines and was fitting well to the cervix.

Diagnosis

Breech presentation in a primigravida, with active labour.

Plan of management

1. The Partogram was started and monitoring of labour started.
2. IV drip of 5% dextrose was started and left to run slowly.
3. Blood grouping and X-matching was also done.

Progress of labour

Labour progressed well. Four hours after the initial vaginal examination, she was found to have strong contractions, 3 in every 10 minutes lasting for more than 40 seconds. The second vaginal examination was done. The vulva was found to have meconeum stained liquor but there was no bleeding. The cervix was found to be fully effaced and 8 cm dilated. The breech was felt just below the ischial spines, and was in left sacro-anterior position and was well applied to the cervix. Labour was considered to be progressing well and was allowed to continue.

Two hours after the second vaginal examination she was having a strong urge to push and the breech was at the vulva and preparation for breech delivery was done. The mother was taken to a high bed and put in lithotomy position. The accoucheur scrubbed himself, and put sterile gloves. The perineum of the mother was cleaned with Savlon 1:20. It was then infiltrated with 10 mls of 1% lignocaine. When the breech was found to be strongly stretching the perineum a left mediolateral episiotomy was performed. The baby was allowed to descend and the buttocks were delivered spontaneously and it was allowed to descend further with subsequent contractions until the umbilicus was at the vulva (Bracht maneuver). At this point it was discovered that it was a frank breech as the legs were fully extended at the knee joints. The extended legs were disengaged using index fingers with further descent of the baby and the loop of the cord was pulled down. When the shoulder blades were visible, gently the arms were palpated across the chest and they were easily flipped out of the vaginal canal by palpation using index fingers. With slight bearing down effort from the mother the child was delivered to the

level, of the neck. The child was then left to hang down by its own weight for a while to allow flexion and descent of the head (Burns-Marshall technique) and the baby dropped slowly until the hairs on the nape of the child's neck became visible. The accoucheur then stood with his back on the mothers left leg and head the child's legs in right hand while exerting a firm outward force to draw the child over the maternal pubis. While the left hand is used to guard the perineum, the legs of the child are rotated towards the mothers abdomen at 180^0 with the foetal head pivoting on the under side of the pubis so that the head is delivered by flexion. As the nose and mouth of the baby are free an assistant swabbed the face with sterile gauze and gentle suction applied into its airway to remove debris. Carefully and slowly the head was delivered, the umbilical cord doubly clamped and divided between clamps. The baby was then handed to an assistant for further suction and resuscitation. A male baby weighing 3.1kg with apgar score 8 at one minute and 10 at 5 minutes was delivered. There were no obvious congenital anomalies seen. Ergometrine 0.5 mg was given intravenously and the placenta delivered by Andrew Brandt's maneuver after it had separated. The placenta and membranes were inspected and were found to be complete and the uterus was well contracted immediately. The perineum was inspected and there was no active bleeding. The episiotomy was immediately repaired in two layers starting from the apex inside the vagina outwards. The muscles and fascia were repaired by continuous stitches using chronic catgut suture No.1 and the vaginal skin and the perineal skin repaired by interrupted sutures using the same suture. Haemostasis was achieved. The baby's umbilical cord was shortened and clamped with a cord clamp and was

immediately handed to the mother and advised to start breast feeding. Estimated blood loss was 160 mls. The mother and the newborn were allowed to rest in the labour ward for one hour and were then transferred to be postnatal ward. The baby received BCG and oral polio vaccinations and both mother and newborn were discharged home the next day in good condition. Before discharge the mother was counseled about family planning and breast feeding. She was also advised to do sitz bath with warm water. She was given an appointment to attend postnatal clinic after 6 weeks.

Follow up after six weeks

Both the mother and newborn were found to be healthy with no complaints. The baby was breastfeeding well. The uterus had in involuted completely and the episiotomy had healed well. She was therefore discharged from follow up and advised to attend maternal and child health clinic health to complete the vaccination schedules at the nearest post.

COMMENTARY

Breech presentation is common before term. It is estimated to occur in 25% of single tone pregnancies at 32 wweeks of gestation. However sometimes before onset labor most of them turn spontaneously to a vertex presentation. So the breech presentation persists in only about 3-4 percent of singleton deliveries[1].

Breech delivery is associated with significantly increased risk of perinatal morbidity and mortality. Most of the morbidity and mortality associated with breech delivery, results from cord compression and difficult in the delivery of the after coming head[2,3]. Other risks include prematurity and cord prolapse. Delivery of a breech presentation can be accomplished by caesarean section

or assisted breech delivery. In developing countries the risk of dying in cesarean section is thirteen times higher than in normal delivery[4]. Thus in areas of poorly developed health systems a high rate of cesarean section presents a hazard to maternal health. Hence advocating lower segment caesarean section in all breech deliveries is not justifiable[5]. It is further suspected that there is a higher rate of cesarean section in breech presentation due to inadequate knowledge of junior staff in vaginal breech delivery[6]. With this picture therefore, the technique of breech delivery is slowly dying among practitioners, and resorting to caesarean section may just be a way of masking ignorance.

Caesarean section should be considered in pre term babies (less than 2500g), babies of above average birth weights (more than 3400g) and in mothers with borderline or contracted pelvises. Foetuses with hyper extended heads on abdominal examination should also be considered for caesarean section as it may lead to cervical spinal injury or lead to difficulty in delivery of the after coming head which likely to present with a wider diameter[1].

Patients with uterine dysfunction, severe intrauterine growth retardation and previous perinatal or neonatal death should also be considered for cesarean delivery. This patient did not present with any one of these problems and therefore vaginal delivery could be safely conducted.

Vaginal delivery is likely to be associated with high perinatal morbidity and mortality as a result of either poor selection of candidates or incorrect application of technique of vaginal delivery[3]. Although according to Zatuclini-Andros scoring system primigravidity is considered a risk factor, it should not be considered an absolute contraindication for vaginal delivery in absence of

other contraindications or obstetric risks. Consideration should be made together with other factors and a proper score given and the mode of delivery planned accordingly. Spontaneous breech delivery although may occur in premature and low birth weight babies, is rare in mature babies[1]. Assisted breech delivery is the single most correct method of vaginal breech delivery which is easier and in turn, perinatal morbidity and mortality are lower. This is what was applied in the presented patient where by the breech is allowed to descend spontaneously to the level of the umbilicus (Bracht maneuver). Application of Burns-Marshall technique allows slow engagement of the after coming head into the pelvis at the same time maintaining flexion of the foetal head. Poor perinatal outcome at this point is likely to be influenced by unjustifiable application of traction which is likely to engage the foetal head too quickly in the pelvis causing intracranial haemorrhage or forcing a well flexed head into an extension and subsequent causation of iatrogenic birth asphyxia or difficult delivery of the after coming head.

Breech extraction is another method of breech delivery, which should be avoided unless necessarily indicated. This will lead to necessity of applying unnecessary techniques such as Mauriceau-Smellie-Viwet Maneuver, modified Prague maneuver, and Prinnard maneuver which are old techniques and are associated with poor perinatal outcome[1]. However, this commonly occurs as a reflex when the accoucheur wrongly think that a spontaneously descending breech by Bracht maneuver is taking too long. In actual fact this is potentially protective to the foetus. It allows the after coming head to accommodate itself to the pelvis and avoid birth injuries with its subsequent outcomes. But, the modified Prague maneuver is sometimes indicated when

the foetus fails to rotate to the anterior and the foetal head engages with occipitoposterior position. Although the outcome of breech delivery can be predicted in carefully selected patients and experienced hands, undue fear to deliver a breech vaginally by inexperienced young practitioners may also be influenced by anticipation of entrapment of the after coming head. This is particularly common in preterm deliveries with bigger discrepancy between the breech and the after coming head, where by the breech may be delivered even with a poorly dilated cervix. It is also common when the breech is extracted with subsequent extension of the head. At this point Duhseens incisions of the cervix may be indicated in modern obstetrics in carefully selected patients[1]. Although Symphysiotomy is advocated by some obstetricians at this point[2,4], its associated morbidity make it have no place in modern obstetrics. When breech delivery fails, there is a room for abdominal rescue which is likely to save both the mother and the foetus when timely decided.

In conclusion it remains clear that the best mode of delivery of a breech presentation at term remain uncertain. However, with carefully assessed and selected candidates and with improvement of skills in conducting breech delivery, Primigravidity alone should not be considered an absolute contraindication for vaginal delivery. This risk should be considered together with other factors.

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OB9: PLACENTA INCRETA CAUSING SECOND STAGE RUPTURE OF UTERUS: WEDGE RESECTION, REPAIR AND BILATERAL TUBAL LIGATION.

Name:	Mrs. S.G.
Age:	26 years
Antenatal number:	157/99
Residential address:	Temeke, Dar es Salaam
Delivery niumber:	16996
Date of admission:	3.12.99
Date of discharge:	10.12.99

SUMMARY

Mrs. S.G. was 20 years old gravida 3 Para 2 + 1 with two living children who was referred to our high risk labour ward due to prolonged labour. She had a spontaneous vertex delivery of a 2.4 kg male baby with apgar score 7 and 8 at 1 and 5 minutes respectively. She had a retained placenta with evidence of intraperitoneal bleeding. At examination under anaesthesia a fundal rupture of uterus was found. Laparotomy was done, and a rupture of the uterus was found at the fundus with haemoperitoneum. The placenta was found extrauterine in the peritoneal cavity. It was lying on the top the ruptured uterine fundus. The margins of the ruptured site had placental tissues which were penetrating deeply into the myometrium but not beyond it. A wedge resection was performed, uterus repaired and bilateral tubal ligation done. The case is presented with a commentary on silent features of placenta increta.

History of present pregnancy and antenatal care

Mrs. S.G. had her last normal menstrual period on the 3rd March 1999 and her expected date of delivery was on 10th December 1999. She was therefore had a gestation age of 39 weeks. She booked at peripheral clinic at 16 weeks of gestation. On booking her weight was 45kg, her blood pressure 110/70mm Hg and her haemoglobin was estimated to be 68%. Albumin in urine was not checked. She made 10 subsequent visits and her weight was increasing well. Her blood pressure remained within normal range throughout her pregnancy and her haemoglobin was progressively increasing. Her fundal height was corresponding with her gestational age. She received one injection of tetanus toxoid and was put on iron and folic acid supplementation. At her last visit one week before admission, her haemoglobin was 75%, her weight was 56kg and her blood pressure was 120/80 mmHg. There had been no incidences of vaginal bleeding.

Labour history

Labour pains started on the night of 3rd December at home and she was taken to a peripheral hospital where labour was allowed to continue naturally with relatively slow progress. 12 hours after she was admitted at a peripheral hospital she was referred to this high-risk labour ward due to poor progress of labour. On admission in the labour ward she was assessed and was found to be mildly pale but with fair condition. Her pulse rate was 90/min regular, her blood pressure was 120/70 mmHg. The fundus was found to be 36/40 corresponding with her dates. She was having moderate contractions and the baby size was estimated to be 2.6 kg. The initial vaginal examination revealed liquor draining per vagina. It was clear and non-foul smelling. The cervix was

fully effaced and 7 cm dilated. The position of the baby was right occipito anterior. There was no moulding or caput and her pelvis was assessed and found to be adequate for the baby. Two hours later she had a strong urge to push. She delivered a 2.4kg male baby with apgar score 7 and 8 at one and five minutes respectively. The placenta retained despite attempt to remove it.

Obstetric history

She was Para 2 + 1, with two living children. Her first delivery was 8 years before and was spontaneous vertex delivery with no antenatal intrapartum or postpartum complications. In her second delivery which was six years before, she had a retained placenta which was removed manually under anaethesia Her third pregnancy ended in spontaneous abortion at 2 months and her uterus was evacuated at a peripheral hospital. This was followed by foul smelling discharge, which was treated and cured.

Menstrual and gynaecological history

She had her menarche at the age 16 years with regular cycles every 30 days, painless periods lasting for 4-5 days of normal flow. She had never been on any method of contraception.

Past medical history

She had no history of hospitalization or pelvic surgery except the manual removal of the placenta and evacuation of her uterus she had. She had no history of irradiation and no history of tuberculosis or any other serious illness.

Family and social history

She was a housewife married to a petty businessman. She did not smoke cigarettes but occasionally she drank alcohol. There was no history of hypertension or diabetes mellitus in the family.

General physical examination

She was a young woman of good nutritional status. She was very pale not icteric and was not febrile. She had no oedema of the lower limbs.

Respiratory system

The respiratory rate was 20 per min and the breath sounds were normal vesicular bilaterally and there were no added sounds.

Cardiovascular system

The pulse rate was 110 beats per minute, good volume and regular. Her blood pressure was 100/60 mmHg. The heart sounds were normal and there was no added sound.

Abdomen

There was supra pubic distension to the level of umbilicus. The uterus was firm and well contracted and tender. Liver spleen and kidneys were not palpably enlarged. There was shifting dullness and fluid thrill was positive.

Pelvic examination

The vulva and vagina were normal. There was umbilical cord protruding from the vagina There were no lacerations.

Diagnosis

Retained placenta. A second stage rupture of uterus was also suspected.

Plan of management

1.Examination under anaesthesia was planned.

2.An I.V. line was established and 1000mls of Ringers lactate infusion was started and left to run at a moderate speed of 40 drops per minute.

3.The patient was told about her condition and the planned management and an informed consent was obtained both for anaesthesia and surgery.

4.Blood grouping and cross matching was done and 1000mls of cross-matched blood group O Rh (D) positive was requested.

5.Injection Ampicillin 1g stat then 500mg 8 hourly x 48 hours.

6.Injection Chloramphenicol 1g stat then 500mg 8 hourly x 48 hours.

Anaesthesia

Induction of anaesthesia was achieved with Atropine 0.5 mg I.V., Ketamine 150 mg I.V., and Oxygenation. Maintenance was by Diazepam 10 mg I.V., halothane 2% and Oxygen 4L/minute given by oxygen face mask.

Procedure in theatre

The patient was put in lithotomy position. The perineum and the vagina were cleaned with 5% savlon solution and then the patient draped with sterile linen. She was catheterized and 200mls of clear urine obtained. Examination under anaesthesia was done. The uterus was explored with exploring hand being guided by the umbilical cord. The cord was felt inside the uterus but the placenta was not felt. There was a rupture felt at the uterine fundus and the cord was felt passing through it into the peritoneal cavity. A rupture of uterus was confirmed and laparotomy was decided up on. The patient was returned in supine position and was given a short acting muscle relaxant and then intubated. The surgeon and his assistant re-scrubbed and put on other sterile gowns and gloves. The abdomen was painted with weak iodine and then dried. She was then draped with sterile linen leaving only the incision

site. The abdomen was opened through a sub-umbilical midline incision as described in obstetric case No. 1

Findings

There was haemoperitoneum of about 1500 mls. The placenta was found extrauterine lying in the peritoneal cavity on top of the fundus of the uterus. There was a vent at the fundus of the uterus through which the cord was passing. The uterus had contracted firmly sealing this vent such that there was no active bleeding at the rupture site. However the margins were having placental tissues penetrating all along the myometrial wall. The rest of the viscera were inspected and were found to be normal. The blood was sucked out of the peritoneal cavity and the placenta removed after cutting the cord so that the cord was pulled through the perineum to avoid contamination. The margins of the ruptured site were trimmed and freshened. The rupture site was repaired using catgut stitch No.1, in two layers. Haemostasis was ensured.

Bilateral tubal ligation was done by Pomeroy's method as described in obstetric case No. 1. The abdomen was mopped, and swabs and instruments were counted and pronounced correct. The abdomen was then closed in two layers as described in obstetric case No. 1. Estimated operative blood loss was 500 mls. And therefore together with blood found in the peritoneal cavity, the total blood loss was 2000mls. She received 3 litres of crystalloids and 500mls of blood intraoperatively and the urine output was 600 mls. The placenta was inspected and was found to have a very thin layer of myometrium between the cotyledons and the serosa.

Reversal of anaesthesia

This was achieved by Oxygen 4L/min and suction, neostigmine injection 2.5 mg intravenously and 1 mg of atropine injection intravenously. She was extubated after establishment of spontaneous respiration. The patient recovered well from anaesthesia and was transferred to obstetric ward in good condition.

Postoperative care

1. Injection Pethidine 100 mg I.M. 8 hourly for 24 hours.
2. Additional 500mls of crossmatched group O Rh D positive blood was given postoperatively and then she continued with I.V. Dextrose saline 3L for 24 hours.
3. Indwelling catheter was left for the first 24 hours.
4. Vital signs had to be monitored hourly for 6 hours then 4 hourly
5. She had to continue with Ampicillin and Chloramphenicol injections as prescribed pre operatively, and there after she continued with oral capsules for 5 days.
6. Inferon 5 mls on each gluteal region in alternate days for 5 days.
7. Tabs Folic acid 5 mg once daily till discharge.

Postoperative progress.

Six hours postoperative she was reviewed and was found to be in stable condition. She looked mildly pale. The pulse rate was 100 beats per min regular, BP110/70 mmHg. The abdomen was soft non tender with no evidence of free peritoneal fluid. She had received 1500 mls of fluids of which 500 mls was blood. She had produced 800 mls of clear urine. 24 hours post operative she was reviewed and was found to be stable, I.V. fluids were

discontinued and the catheter removed. She was instructed to start oral feeds and to start ambulation at the bedside. She remained well throughout her postoperative period. She did not develop fever and her vital signs remained normal. Her haemoglobin checked on the third postoperative day was found to be 8g/dl. She had uneventful recovery. On the 7th postoperative day she was counseled about her problem and what was done to her. She understood and accepted. She was discharged home on Folic acid and Ferrous sulphate tablets together with her newborn both in good condition. Before discharge the baby received oral polio and BCG vaccinations.

Follow up

She was seen 6 weeks post delivery with good general condition. Her blood pressure was 110/70 mmHg. Her uterus had completely involuted.

She was further counseled about her problem, what was done and the rationale. A sample of urine for pregnancy test was taken and was negative. She was discharged and advised to continue attending the under five clinic at the nearest maternal and child health clinic.

COMMENTARY

Placenta increta is abnormally adherent placenta where by chorionic villi invade the myometrimun to various degrees but do go beyond it. These conditions though uncommon, assume considerable significance due to morbidity and some times mortality[1]. The true frequencies of placenta accreta, increta and percreta are unknown, but it is estimated to occur in 1:2000 to 1:7000 pregnancies[1]. Placenta increta contributes 15% of cases of abnormally adherent placentae[2].

This condition is found most often in circumstances where decidual formation was likely to have been defective. There is a strong association between placenta accreta, increta or percreta with placenta praevia (15-38%), and in patients who had previous lower segment caesarean birth[2]. However this patient had no such history and the placenta was fundal.

Trauma to the uterine cavity such as that occurring during manual removal of the placenta, curettage following incomplete abortion, or dilatation and curettage are possible important aetiological factors in this patient. These procedures cause trauma to the endometrium leaving an area that is deficient of the endometrium and when implantation occurs at these sites abnormal adherence may occur. The post abortal sepsis she had is likely to augment this problem

Non sterilizing doses of intracavitary radiation, implantation in uterine diverticulum, myomectomy, chemical injury to the pelvic organs and presence of accessory horns of the uterus are other aetiological factors, quoted in literature, but were irrelevant in this patient.

Minor uterine perforations during dilatation and curettage or following evacuation of the uterus that are undiagnosed and therefore go unnoticed could also contribute to the development of this condition.

Antepartum diagnosis of this condition is difficult and usually not made until complications develop in the third stage of labour, such as retention of placenta and uterine rupture.

Although management of placenta increta varies according to the presentation, subtotal hysterectomy is usually conducted in such patients[3].

However conservative surgeries such as wedge resection can be attempted in some selected patients so as to preserve their reproductive capacity [4].

This patient had wedge resection and repair but also had bilateral tubal ligation. Preservation of reproductive function was not a serious consideration in this patient. The procedure of wedge resection and repair was thought to be shorter than hysterectomy when one considered the patient's condition.

Ligation of internal iliac arteries could be considered to control haemorrhage instead of hysterectomy when reproductive capacity needed to be preserved.

On theoretical considerations; chemotherapeutic agents such as methrotrexate could be useful in conservative management of an adherent placenta. However the risk of haemorrhage is high and clinical data to substantiate its effectiveness is lacking[3].

Several complications have been encountered in patients with placenta increta. Rupture of uterus is a fairly common complication mentioned in literature although not common at this center. Cases of spontaneous rupture of uterus have been observed as early as 14 weeks[5], and 22 weeks of gestation[6,7].

Haemorrhage is the most serious and the commonest complication, following incomplete expulsion of the placenta, and placenta increta complicating into placenta percreta with uterine perforation and invasion of adjacent viscera. Aggressive resuscitation and definitive treatment of the condition are primarily aimed at preventing or controlling this complication.

Inversion of the uterus and infections are other complications[1]. Acute uterine inversion, is usually a result of un undue attempt to deliver the adherent

placenta forcefully. Persistence of the trophoblastic tissues following conservative surgery, with re appearance of the symptoms have been observed in some patients[8]. Therefore follow up after conservative surgery is important.

To conclude, placenta increta is relatively rare but serious obstetric condition. Its timely and appropriate management can significantly minimize morbidity and mortality. Although conservative surgeries can be attempted, these should not be at the expense of the patient's lives. A doctor attending the patient should be in position to individualise the patient's management according to the prevailing situation and future fertility needs.

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OB10: ADVANCED ABDOMINAL PREGNANCY: LAPAROTOMY AND LIVE FOETUS.

Name: Mrs S.M.

Age: 24 years

Antenatal number: 324/98

Residential address Tegeta-Dar es Salaam.

Delivery number: 03572

Date of admission: 16.3.99.

Date of discharge: 25.3.99.

SUMMARY

Miss S.M was 24 years old primigravida who was admitted to our labour ward at 41 weeks of gestation with labour like abdominal pain. She admitted to the fact that since early pregnancy she had been having on and off abdominal pain for which she was given various analgesics. On clinical evaluation in the labour ward the abdomen was distended and tender more marked on the hypogastrium. The foetal parts were easily palpable beneath the the abdominal wall and the foetal heart sounds were heard. On pelvic examination the cervix was thick long and displaced anteriorly and to the maternal right. The foetal head was felt at the posterior fornix towards maternal left side. An ultrasound could not be performed due to technical problems. An advanced extrauterine pregnancy was suspected and cofirmed at laparotomy. She was was delivered of a 1.5 kg female baby with an apgar score of 5 and 7 at 1 and 5 minutes respectively with no obvious skeletal malformations. The placenta was found on the fundus of the uterus and was

left insitu. She had uneventful recovery and was discharged on the 7th postoperative day together with her newborn both in good condition.

History of presenting illness

Miss S.M was 41 weeks pregnant and was admitted to our high risk labour ward from home complaining of lower abdominal pain which was dull in nature and occasionally pricking. The pain had started since early pregnancy but one day before admission the pain became worse and was aggravated by foetal movements. She denied any history of trauma. She was not draining liquor amni. She had no dysuria or frequency and had no loin pain or fever. Since the beginning of this pain she had been put on various analgesics at peripheral clinics with only short-lived relief.

Antenatal history

She had her last normal menstrual period on 5.6.98 and her calculated expected date of delivery was therefore supposed to be on 12.3.99. She was therefore 41 weeks by dates. She had booked at peripheral clinic at 20 weeks of gestation. Her weight was 57 kg and her blood pressure was 110/80 mmHg. She had her first dose of tetanus toxoid vaccination on booking. Her haemoglobing was estimated to be 60%. She made three subsequent visits and her weight gain was slower than expected. Her blood pressure was ranging between 90/60 mmHg and 110/70 mmHg. She was on irregular supplementation of Iron and folic acid tablets. Her haemoglobin was not checked in all her subsequent visits. At three months of pregnancy the patient started to experience low abdominal pain narrated above which was persistent.

Obstetric history

She was a primigravida.

Gynaecological and menstrual history

She had her menarche at 15 years of age with regular cycles of 28 to 30 days with painless periods of 4 to 5 days and normal flow. She had no history of genital discharge and had no history of using any method of contraception including intrauterine contraceptive device.

Family and social history

She was a primary school leaver and was not married. She was a petty businesswoman and was living alone. She neither smoked nor drank alcohol. She had no known history of diabetes mellitus or hypertension in her family.

Past medical history

She had never suffered from any serious illness and therefore her past medical history was uneventful .She had no history suggestive of pelvic inflammatory disease.

General physical examination

She was a young woman afebrile not pale not icteric with fair general condition. She was in pain.

Respiratory system

She was not dyspnoic with a respiratory rate of 18 per minute. There was bilateral chest expansion with normal vesicular breath sounds and no added sounds.

Cardiovascular system

She had a pulse rate of 90 beats per minute, of good volume and regular. The blood pressure was 110/70 mmHg and the first and second heart sounds were heard and they were normal with no added sounds.

Abdomen

The abdomen was uniformly distended and moving with respiration. There was no therapeutic mark and no surgical scar. There was generalized abdominal tenderness but the abdomen was not tense. She had a fundal height corresponding to 34 weeks. The foetal parts were very easily palpable beneath the abdominal wall. It was difficult to feel the lie and the presentation of the foetus. There was a separate mass suprapubically which was tender. The foetal heart sounds were heard and were regular. The renal angles were non tender and the bowel sounds were heard and were normal.

Vaginal examination

Inspection revealed a normal vulva with no liquor amni draining. Speculum vaginal examination revealed a healthy cervix, which was displaced anteriorly and just bellow the pubic symphysis. It was also displaced towards the right maternal side. There was no liquor draining from the external oss. Digital examination revealed a 1.5 cm long firm and closed cervix. There was a hard mass felt on the posterior fornix towards the left maternal side.

Impression

Based on above evidence, an advanced intrabdominal pregnancy was suspected.

Investigations and results

- Haemoglobin was 11g/dL.

- RBC morphology was normochromic and normocytic.
- White blood cells count was found to be normal in number and distribution.
- Platelet counts were normal.
- Mid stream urine for culture and sensitivity did not reveal any bacterial growth.
- Blood group was A Rhesus (D) Positive.
- VDRL test was negative.
- Abdominal ultrasound was requested but could not be done due to logistic problems.

Management plan

Laparotomy was planned.

Pre operative preparations

1. Haemoglobin was checked a short time before surgery and was 10g/dl.
2. 1000mls of crossmatched blood group A Rh(D) positive was made available and reserved for the patient.
3. She signed an informed consent for anaesthesia and surgery.
4. An intravenous 16 gauge canular was set in theatre and normal saline left to run slowly.

Procedures in theatre

1. The patient was catheterised and about 200 mls of clear urine was drained.
2. The surgeon and assistants scrubbed, dressed in sterile gowns, and donned sterile gloves.

3. The patient's abdomen was cleaned with weak iodine solution twice and then dried with a dry swab on a holder.
4. She was draped with sterile linen and only the incision site was exposed.

Anaesthesia

This was given as in obstetric case no 1.

Surgical procedure

The abdomen was opened through a sub-umbilical midline incision with cephalic extension deviating the umbilicus. The rectus sheath was cut at the midpoint between the umbilicus and the pubis symphysis and was extended both proximally and distally by using a Mayo pair of scissors Carefully the peritoneum was identified close to the umbilicus and was clamped with two long artery forceps, care being taken not to clamp the viscera by lifting up the peritoneum and ensure the transparency of the peritoneum. The incision was extended proximally and distally guided by the index and middle fingers, which ensure that the viscera are not injured during the process. There was scanty ascitic fluid, which was sucked. The foetal membranes bulged and were ruptured. Clear liquor drained out and the right hand was carefully and gently inserted and delivered a 1.5 kg female baby with apgar score 5 at one minute and 7 at five minutes. Further careful suction of amniotic fluid was done so as to explore the abdominal cavity and identify the site of attachment of the placenta. In this process there was accidental provocation of bleeding from the omental vessels, which were also partly supplying the placenta. These were doubly clamped and ligated with cutgut No.1 and then

resected so that the omentum is separated from the placenta. The placenta was found to be lying on the fundus of the uterus and was thick and highly vascularised. It was thought that removing the placenta was dangerous, so the umbilical cord was resected very close to the placenta and the placenta left insitu. Haemostasis was ensured, swabs and instruments were counted and pronounced correct. Then the abdomen was closed in layers: peritoneum with cutgut No 2/0, rectus sheath with continuous suture of vicryl No.1 with intermittent knots in between, and the skin with interrupted sutures of silk No. 0. Estimated blood loss was 1500. The patient received 500 mls of cross-matched blood intraoperatively.

The baby

The female baby was weighing 1.5 kg and had apgar score of 5 at 1 minute and 7 at 5 minutes. She was fully examined and had no any congenital malformations. The moro and sucking reflexes were present but weak. She was given antibiotics (gentamycin and Ampiclox) for 5 days. She was then given BCG and polio vaccines before discharge.

Reversal of anaesthesia

This was done as described in obstetric case No 1.

Postoperative orders

1. Blood pressure, pulse rate, respiration and temperature were monitored hourly for 6 hours the 4 hourly there after and remained normal.
2. Another 500 mls of blood was given and then 3litres of intravenous Ringer's lactate were given in the first 24 hours.

3. Urinary out put had to be monitored, and 1800 mls of urine was produced in the first 24 hours.
4. Injection Ampicillin 500 mg was given intravenously 8 hourly for the first 24 hours and then continued with oral ampicillin 500mg 8 hourly for 5 days.
5. Intravenous metronidazole 500 mg was given 8 hourly for 24 hors and then oral metronidazole 400 mg 8 hourly for 5 days. All these antibiotics were given to prevent infection as the placenta was left insitu.
6. Injection pethidine 100 mg intramuscularly 8 hourly for 24 hours to alleviate pain.

Progress in the ward

She had a steady recovery while in the ward. She had normal vital signs throughout postoperative period. On the third postoperative day her haemoglobin was 9 g/dl. She was put on ferrous sulphate and folic acid tablets. The stitches were removed on the 7th post operative day. Her baby stayed in neonatal ward for a week for care and treatment due to mild birth asphyxia and was discharged to the mother. On the 8th postoperative day both the mother and her newborn were discharged home in good condition.

Follow up

Both the mother and the newborn were seen six weeks post operative and the mother was healthy and had no complaints. The uterus and the placenta had involuted well and was only equivalent to a 12 weeks gravid uterus. The pregnancy test was done and was negative. Her haemoglobin

was 10.5 g/dl. The surgical scar had healed by primary intention and there was no evidence of pelvic or intrabdominal infection. The newborn was also in good condition with no obvious abnormality. She was advised to do an abdomino-pelvic ultrasound, which revealed a normal sized uterus with a small hyperechoic mass of about 4 cm in diameter attached to the fundus of uterus. She was reviewed again three months later and was found to be healthy with no complaints. The uterus had completely involuted to normal non pregnant state and there was no pelvic mass felt. This was rather unusual early resorption of the placenta. She was discharged and was advised to continue with vaccination schedule for her baby at the nearest maternal and cild health clinic. She was also advised to attend to our gynaecological outpatient clinic whenever she had any problem.

COMMENTARY

Abdominal pregnancy is rare. The incidence is ranging from 1/3000 to 1/10000 deliveries. It represents approximately 1% of all ectopic pregnancies[1]. Older non-white women with a few previous deliveries or with secondary infertility are at great risk of abdominal pregnancy. Hospital records at this center show the incidence of abdominal pregnancy to have fallen from 1/3259 deliveries in 1982/83 to about 1/5077 deliveries 1998/99. In the later it contributed approximately 0.001 of obstetric surgeries performed. This could be explained by some advancement in the diagnostic techniques at the center over that period. The condition is more common in developing countries as compared to developed world possibly due to facilities for early diagnosis. It may occur

as a primary implant or commonly develop secondary to tubal abortion or rupture [2,3].

Clinical picture of early abdominal pregnancy is indistinguishable from tubal pregnancy. However as it advances, unexplained abdominal pain, nausea or vomiting may occur. The location of pain is usually at the site of implantation and the Braxton Hicks contractions are notably absent[2]. In this patient, the dull abdominal pain presented since early in pregnancy could rise a suspicion[4]. Abdominal tenderness, easily palpable foetal parts, and lack of cervical effacement also offer the clue towards the diagnosis.

Management of abdominal pregnancy vary according to the gestation age at diagnosis[3]. In the first and last tremister laparotomy is indicated as soon as the diagnosis is made due to its associated risks. When diagnosed in second tremister, expectant management in hospital may be attempted. However this carry a high risk of sudden life threatening intraperitoneal haemorrhage. In this case crossmatched blood must be available as surgery may be needed at any time. It is because of this danger that some obstetricians advocate termination of pregnancy at diagnosis[4]. Miss. S.M was term when she was first seen in our labour ward and therefore immediate delivery was indicated.

Intraoperative blood loss in such patients is unpredictable but usually heavy [2]. Therefore sufficient crossmatched blood should be made available before this operation is attempted. In this patient the available 1000mls of blood was life saving in view of her blood loss. Experience of the surgeon is vital as sometimes resection of vital organs may be inevitable[2].

In this patient the placenta was attached at the fundus of the uterus and therefore organ resection was not needed.

A wide bore cannular is of importance to secure a reliable intravenous line that enables rapid infusion of fluids when need arises. The bleeding is potentially expected even when the foetus is dead. In such circumstances other obstetricians advocate the policy of deferring from surgery for several days to allow partial resolution of the placenta[2] this was not applicable in this patient as the baby was still alive and therefore immediate surgery was indicated.

During surgery minimal manipulation is advised. Careful inspection to establish implantation site, opening of the sac and careful delivery of the foetus with minimal disturbance of the placenta is advocated. When bleeding accidentally occurs it is best controlled by identification of the bleeders, clamp and ligation. Blind stitching into the placenta tissue is dangerous. Accessory blood supply to the placenta should be ligated to hasten the placenta involution.

Removal of the placenta is possible when attached at a site where blood supply can be blocked by ligation[2]. But this exercise is potentially dangerous as it caries the risk of haemorrhage [2,3]. Partial separation of the placenta is likely to occur spontaneously or commonly in course of operation. Ligation of the cord and dividing it close to its insertion and closure of the abdomen was done in this patient.

To avoid premature separation of the placenta, marsupialisation of the edges of the amniochorion to the peritoneal edges of the abdominal incision followed by packing of it with gauze is recommended by some

obstetricians The gauze pack is removed gradually in the early post operative period[2]. This was unnecessary in this patient.

The potential for postoperative complications is always present especially when the placenta is left insitu. These include infections (peritonitis and abscesses) secondary haemorrhage, fistulae formation and wound dehiscence. Studies in this center revealed sepsis as the leading maternal complication when the placenta is left insitu[4]. This is why broad-spectrum antibiotic coverage is advised especially in such circumstances. Other complications include adhesions and intestinal obstruction. These have to be followed on long-term basis. Persistent hydronephrosis may occur especially if the placenta is left insitu[5].

If the placenta is left insitu, its involution can be monitored using ultrasound and a variety of placenta hormones. Quantitative βhCG were not performed in this patient, but disappearance of pregnancy symptoms with a negative pregnancy test and well involuting uterus and the placenta were cost effective ways of ensuring placenta involution is taking place in this patient.

The risk of leaving the placenta insitu, have prompted others to consider chemotheraputic agents such as methotrexate to promote placenta resorption[6]. This was only short lived in gynaecology history as this drug led to accelerated placenta destruction with accumulation of necrotic tissue and ultimately to infection and abscess formation[3]. Currently it is considered best not to use methotrexate unless strongly indicated.

Although the implication of leaving the placenta are troublesome, they may be less grave than the haemorrhage that sometimes result from placenta removal during the initial surgery [3].

Selective embolisation of bleeding sites, per cutaneous femoral artery and pelvic angiography using gelfoam, microspheres, or angiography dye have been life serving in some instances of bleeding. However these are also not free of side effects, and therefore their use should be individualized and in strongly indicated patients.

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PRETERM PREMATURE RUPTURE OF MEMBRANES: MAGNITUDE, OBSTETRIC CHARACTERISTICS AND PREGNANCY OUTCOME AT MUHIMBILI MEDICAL CENTRE.

ABSTRACT

A prospective study was conducted at Muhimbili Medical Centre from 1st of October 1999 to 29th of February 2000 (inclusive) to determine the magnitude, obstetric characteristics and pregnancy outcome of among women diagnosed to have preterm prematue rupture of membranes between 28 weeks and 37 weeks.256 women were involved in the study. 4 women were lost in the follow up and therefore were not available for final review. These were only used for calculation of prevalence but were not included in the final analysis.

The diagnosis of preterm PROM was reached by history taking, and physical examination including speculum vaginal examination. No laboratory investigations were done to confirm the diagnosis

Data were collected by the author and his assistants, using a structured questionnaire. The patients were admitted in the wards and followed up until delivery. Post delivery the birth weight, apgar score, evidence of RDS, and evidence of neonatal or maternal infective morbidity were noted. The data were analysed using Epi info version 6.

The results revealed 256 women who were diagnosed to have preterm PROM. The total number of deliveries in the study period was 7213, making a prevalence of preterm PROM of 3.55 %. 4 women were lost in the follow up and were not used in the final analysis.

There were 20 sets of twins delivered by these patients, therefore the number of newborn babies delivered were 272. Majority (59.1%) of the affected women were married and were housewives or peasants. The prevalence of low birth weights (less than 2500g) was 66.2%.

Out of 272 newborn babies 24 (8.82%) developed RDS, 33 (12.1%) of newborns developed different forms of neonatal infective morbidities. Perinatal or early neonatal mortality among newborns was 206/1000 deliveries.

Out of 252 mothers diagnosed to have preterm premature rupture of membranes, 40 (15.9%) developed different forms of maternal infective morbidities. Severe forms of maternal infective morbidities were rare and there was no maternal death among the study population.

Recommendations are made and further studies are suggested to determine the association factors, and factors contributing to perinatal and maternal infective morbidities apart from the latency period.

Interventional studies are also suggested to determine the gestational age when active management can be advocated so as to shorten the latency period and its consequences.

INTRODUCTION AND REVIEW OF LITERATURE

Preterm premature rupture of membranes in pregnancy (PPROM) is a major cause of preterm delivery. It accounts for 6% of deliveries and therefore contributes significantly to perinatal morbidity and mortality mostly attributed to prematurity[1]. In developed world alone the incidence of preterm premature rupture of membranes is about 2 - 3.5% [2],with black women experiencing a two fold in incidence over their caucasian counterparts[3]. 30% - 40% of preterm neonates are born to women with preterm premature rupture of membranes. This makes preterm premature rupture of membranes the leading identifiable cause of preterm delivery[2]. Studies done at this centre by Mbelesero[4] and Hamudu[5] found a prevalence of PROM to be 3.2% and 4.5% respectively. But in both studies PROM at term was also included. This is therefore the first study at this centre in which preterm PROM is studied separately. Although most of the cases of preterm premature rupture of membranes occur after 32 weeks, the major contribution to perinatal mortality is attributable to premature rupture of membranes earlier than 32 weeks[2]. This has been observed in developed countries where facilities for neonatal intensive care are advanced and therefore severe morbidity and mortality is significantly improved in such preterm babies. It is therefore tempting to speculate that this problem could be even more serious in developing countries like ours where these facilities are either lacking or inadequate.

The main maternal risks associated with preterm premature rupture of membranes are chorioamnionitis and puerperal infections. The risk of maternal death due to these problems in developed countries has decreased

from about 0.2% in 1958/59 to 0.03% in 1982[2]. Premature delivery as has been mentioned above as the main neonatal complication of PPROM, is associated with complications including surfactant deficiency leading to respiratory distress syndrome, perinatal infections, hypothermia, necrotising enterocolitis, and birth injuries. Other risks, which contribute significantly to perinatal morbidity include malpresentations and cord prolapse.

Although there is no single known aetiology of preterm premature rupture of membranes, different researchers have come up with different factors, which have shown association with preterm premature rupture of membranes. Proper follow up of these factors and time of occurence of preterm premature rupture of membranes, may help the obstetrician to identify intervention methods to protect the mothers who are at high risk and therefore prevent or reduce the occurrence of this event and its hazardous outcomes.

Low collagen content in the amnion has been suggested to contribute significantly towards preterm premature rupture of membranes. Sub-clinical infections which lead to increased protease activity has been suggested as the primary cause of the reduced collagen content[1]. A growing body of evidence currently supports the role of proteolytic and elastolytic activity in patients with preterm premature rupture of membranes[6]. This has been suggested by studies in which this process was inhibited by protease inhibitors. This also implies that enzymatic mechanisms participate in weakening the membranes[7].

Apart from the above aetiological factors, there are various clinical risk factors, which have been implicated based on studies. Berkowitz and his colleagues[8] found that the risk is higher in blacks as compared to caucacians. They also

found that previous preterm birth, late booking at the antenatal care, in-utero exposure to diethyl stilboestrol, pre existing diabetes mellitus and ante-partum bleeding are significantly associated with preterm PROM[8,9].

Harger and his associates[10] found that ante-partum haemorrhage, previous preterm delivery and cigarette smoking during pregnancy were associated with preterm PROM. Similar findings were reported by Spinillo and his co-workers[11]. On top of that the later found that low socio-economic status, first trimester haemorrhage, cervical incompetence and cervico-vaginal infection during index pregnancy were also significantly associated with preterm PROM. In line with above factors, Asrat and his colleagues[12] found significantly increased recurrence rate of preterm premature rupture of membranes in subsequent pregnancies.

The problem of cigarettes smoking has been studied further. Naeye found no association between smoking and preterm PROM. On the other hand Mayer and Tonascia found that the risk of preterm PROM before 34 weeks was more than three times higher for smokers than for non-smokers. Evadson and associates confirmed this finding [2] Mechanism by which smoking lead to preterm PROM is probably decidual vasculopathy, with resultant ischaemia, and necrosis of the part of the amniochorion. However, since smoking is uncommon habit among women in my study population, its contribution towards this problem in the study set up is unlikely to be significant.

There is also controversy on the role of sexual intercourse during pregnancy, as well as various surgical procedures in the genital tract as factors contributing to preterm PROM[2,10]. Such surgical procedures are however not

commonly performed in my study population.

In view of the emphasis on the role of ascending infection in the aetiology of preterm PROM, cervical vaginal flora in pre term premature rupture of membranes have been studied. There is enough evidence to support an association between infection with *Chlamydia trachomatis* and *Neisseria gonorrhoea* and preterm premature rupture of membranes. Supporting the same idea of ascending infection, Kjaergaard and his colleagues[13] studied males whose spouses had preterm premature rupture of membranes, they found that pyospermia with or without positive culture in men was significantly associated with preterm PROM in their spouses. This could be evidence towards support of the association between late pregnancy coitus and preterm premature rupture of membranes. In support of the same theory Mc Gregory and his colleagues[7], evaluated invitro the efficacy of the antibiotics, erythromycin and clindamycin in preventing bacterial protease-induced weakening of amniochorion. Both antibiotics prevented foetal membrane weakening due to test bacteria and both antibiotics prevented bacterial cell growth and release of protease. These findings suggest that inhibitory and even sub-inhibitory doses of antibiotics such as erythromycin and clindamycin may be effective in reducing the occurrence of premature rupture of membranes in mothers who are at high risk of preterm PROM mediated by cervical colonisation by susceptible micro-organisms.

Despite this suggestive evidence that infection or cervical colonisation with certain microorganisms may increase the risk of preterm PROM, there is paucity of information regarding the effect of the treatment. Therapeutic trials

are required to determine if treatment of Group B Streptococci and Trichomonas may reduce the risk of PROM. Management protocol of mothers presenting with pre term PROM is also a controversial issue.

Conservative management of Pre term PROM has enjoyed support from majority of scientists but it is not universally acceptable. Before considering conservative or active management several factors have to be considered. These include the gestation age, the ability of the neonatal intensive care unit in handling new-borns of particular gestational age and the risk of neonatal and maternal infectious morbidity.

Naef and his associates[14] evaluated the active management of mothers with pre term premature rupture of membranes at gestation age of 34 weeks to 37 weeks and recommended it to be safe and prevent maternal and neonatal infectious complications. But in a centre like this the risk of prematurity should also be considered.

Pajnter and Vernedisk[15] studied maternal and neonatal outcome related to delivery time following premature rupture of membranes and found that with increase time elapsed following preterm PROM there was significant increase in incidence of induced labour, operative delivery, foetal distress, poor foetal condition at birth, neonatal infections and minor maternal infections.

Despite this group of workers there is another school of thought which is in favour of conservative management following preterm PROM. Philipson et al[16] did a study where patients with preterm premature rupture of membranes were managed conservatively and significant number of them delivered at term and others delivered prematurely and all of them had good 5 minutes apgar

score. They therefore concluded that some mothers could be managed conservatively and others even as outpatients and deliver at term. Neerhof[17] share a similar opinion in supporting conservative management but he found a break point in neonatal morbidity at 34 weeks and therefore support induction of labour at this time. Oligohydramnious at presentation was found to be a significant factor which determines prognosis of conservative management in mothers with pre term PROM which occur at less than 35 weeks[18].

Due to a growing evidence of infective aetiology of preterm PROM, sub-clinical infection is believed to precede the rupture of membranes. But studies have shown that microorganisms isolated from the amniotic fluid of women with preterm PROM are similar to those found normally in the genital tract. It is therefore suffice to conclude that microbial invasion of amniotic fluid follows the ascending pathway. Therefore, although there are various pathogens causing preterm PROM, colonisation of the amniotic fluid is mainly by normal flora. To prevent this complication, various workers have studied the effects of various antibiotics and have recommended them during conservative management to prevent infectious morbidity both to the mother and the newborn babies.

Various antibiotics have been used during conservative management with good results. The results include prolongation of latent period and reduced need for special neonatal care[19]. Others are delay or prevention of maternal infective morbidity such as chorioamnionitis, endometritis and also leads to good one and five minutes apgar score[20,21,22,23,24] Negative effects of antibiotics

such as super-infection by potentially resistant pathogens have also been reported by other studies[25,26,27]. Antibiotic regimen should follow local sensitivity pattern. However some of the regimen, are too expensive to be afforded by our population. Despite all these controversies, studies have shown that the benefit of antibiotic prophylaxis during expectant management of preterm PROM outweighs the risk[26].

Use of tocolytics in management of pre term premature rupture of membranes, has been advocated by many workers so as to delay labour in order to allow lung maturation and therefore prevent perinatal complications. These forms of treatment can also influence the perinatal outcome.

The use of steroids in patients with pre term premature rupture of membranes is an issue of clinical relevance because RDS is the major cause of neonatal morbidity and mortality in pre term deliveries. However other effects apart from what they are administered for should be watched for carefuly.

STATEMENT OF THE PROBLEM AND RATIONALE OF THE STUDY

- Based on hospital data prematurity rate at this centre is high. It accounts for 25% of total number of admissions in our neonatal ward. Considering data from developed World studies where 30-40% of all premature deliveries are due to preterm PROM and that Black population in developed world suffer two fold the risk of preterm PROM compared to their caucasians counterparts, probably due to low socio-economic status. It is tempting to assume that this problem could be more serious in our set up than in the developed world, due to the low socio-economic status of the

majority of our population.

- Paucity of information regarding this problem at our centre hinders interventional strategies to prevent this problem and its out come.
- Previous studies done in this centre included both preterm and term PROM and therefore did not cater for this special group of women with preterm PROM separately. This study will therefore give a baseline data on the magnitude of preterm PROM and its significance in terms of maternal and perinatal morbidity. This knowledge will subsequently enable the centre to lay down interventional strategies targeting the at risk mothers so as to prevent its occurrence and complications.
- The study will also enlighten on the relevant areas for further studies in this broad subject.
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BROAD OBJECTIVE

To determine the magnitude, obstetric characteristics and pregnancy outcome of pregnant mothers with preterm premature rupture of membranes (Preterm PROM) delivering at Muhimbili Medical Centre Dar es Salaam.

SPECIFIC OBJECTIVES

1. To establish the prevalence of preterm PROM and the gestation age at which it occurs at Muhimbili Medical Centre.
2. To establish previous obstetric complications and antenatal complications in index pregnancy in mothers with preterm premature rupture of membranes.

3. To determine the latency period, prevalence of prematurity, clinical neonatal infective morbidity and RDS in new born babies delivered by mothers with preterm PROM.
4. To find out the prevalence of clinical maternal infective morbidity in mothers with preterm PROM.

MATERIALS AND METHODS

Study area

The study was conducted at Muhimbili Medical Centre labour ward and antenatal wards. Theoretically it is a tertiary centre but practically it is also regarded as the second and sometimes first level of referral. No restriction is made to mothers attending this centre and some mothers are self-referral from home. It is intended to handle high-risk deliveries only but in practice it cares for normal deliveries as well. On average about 15000 to 15500deliveries are conducted annually.

Target Population

The target population was all mothers who presented with preterm premature rupture of membranes at gestation age of 28 and less than 37 weeks. It included all those who came for delivery or antenatal care at Muhimbili Medical Centre between October, 1st 1999 and February, 29th 2000 inclusive. 28weeks was taken as the minimum gestation age because all deliveries bellow this gestational age are still considered as abortions at this centre.

The study design

The study design was a cross sectional descriptive study.

Sampling technique

The sampling procedure was by convenience. Therefore all mothers diagnosed to have preterm PROM between the specified gestational ages and within the specified period of study were included in the study.

Recruitment

- Patients with preterm premature rupture of membranes were recruited from the antenatal clinic, antenatal wards and the labour ward. All mothers complaining of passage of fluid from the vagina, continuous leak or with intermittent leakage were examined by the principal investigator and /or assistant investigators.
- The diagnosis of preterm PROM was on the basis of history taking and physical examination. Colour, smell, presence of lanugo hairs or vernix caseosa were ancilliary findings used to assist in confirming the diagnosis.
- A sterile speculum examination of the vagina was done by the principal investigator or his assistant investigators. A pool of amniotic fluid in the posterior fornix or leakage of clear fluid with a characteristic smell, colour from the uterine cavity was diagnostic of preterm PROM.
- All patients with confirmed preterm PROM were admitted and kept in the ward for follow up.
- All necessary information was filled in a specially designed questionnaire on admission and the later was kept with the patient's case-note for further follow up. This was done by the principal investigator himself or his assistants.