ACUTE INVERSION OF UTERUS

by

M. D. ADATIA

and

MISS S. P. RAVEL

The condition is described to be one of the rarest complications of labour. About half of them occur spontaneously and are observed in primiparous women. Its incidence is variously stated by different workers. Jardine[5] from Glasgow Maternity Hospital has reported it to be 1 in 17000 deliveries, Zangiemeister for Germany puts it as 1 in 400,000, Mc Cullagh as 1 in 23,000, Harer and Sharkey as 1 in 16,240 and Das from India as 1 in 23127 deliveries.

Acute inversion may take place spontaneously or may occur due to artificial interference while taking out the placenta or if the placenta is expelled while stimulating the uterus for contraction.

Das reports that in his series 40% were spontaneous inversions and out of them 75% of the cases had fundal attachment of placenta, while Mc Cullagh has reported spontaneous inversion in only 13% of cases. The exact cause of spontaneous inversion is not understood but most of them have fundal attachment of placenta and in some instances there may be localised atony of the uterus at placental site while the rest of the uterus might be actively contracting. In cases of atony of the uterus sudden increase of intra-abdominal pressure takes place due to coughing, sneezing or straining which may lead to inversion of the uterus. Anemia and general debility might predispose to atony or relaxation of uterus.

Thus for inversion the predisposing factors are:—

(a) Uterine relaxation.

(b) Fundal attachment of placenta.

While exciting causes are:—

(a) Improper Crede's method to express the placenta.
(b) Traction on cord or short cord.
(c) Precipitate labour.
(d) Manual removal before complete separation of placenta.
(e) Over-distended uterus.
(f) Widely torn or gaping cervix.
(g) Unknown cause.

Symptoms

The symptoms start all of a sudden with sensation of something coming out and with pain in the lower abdomen, quickly followed by symptoms of shock and bleeding. The symptoms would be less severe if it is partial inversion and more severe if the inversion is complete. The symptoms develop very quickly and the bleeding is observed in the beginning but is less if the uterus is pushed outside because of the compression of the uterine and ovarian vessels.

Comments

Particularly in moffusil practice the incidence does not seem to be so very rare as quoted in literature. If the exciting causes are minimised and if the conduction of delivery is carried out in well equipped maternity hospitals under observation of trained obstetricians, the incidence would certainly become very, very rare. It is a very grave complication and carries high mortality. Mc Cullagh reports 25% while Phaneuf has recorded 34% mortality in his cases.

Miles Phillips says that the patient does not succumb to the incident itself but due to injudicious treatment that is employed. Thirty per cent of the patients would die, if the reduction of uterus is attempted in the presence of shock. Even if the inverted uterus cannot be reduced it is always advisable to push it into the vagina so that pull on the infundibulo-pelvic ligament is reduced and the shock is lessened. Sometimes uterus may become gangrenous as reported by Bland because the constricting ring might get very tight. Cases have even been reported where midwives have mistaken inversion for the head of the second baby and tried to pull it out. It is always advisable to treat the shock first and then do the replacement of the uterus.

The replacement is carried out in a manner similar to that of reduction of intestinal hernia. Steady compression on the fundus should be applied with one hand and the other hand would steady the constricting ring externally. Reduction would be thus slow but never undue force should be applied. Attempting to reduce the uterus, the obstetrician might even rupture the posterior fornix and the whole inverted uterus would be pushed through it into the abdomen. The renowned French obstetrician Paul Bar suggests to reduce the anterior part of the inversion first so that the chances of rupturing the uterus by applying pressure on posterior part (lower segment) of the uterus would be minimised. Some surgeons also recommend injection of adrenaline or amyl nitrite to relax the ring. Several workers suggest packing of uterus after reduction but others find it unnecessray. Hendersen and Alles suggest application of ring forceps to the ring of the cervix and then to attempt the replacement by taxis. Johnson has recommended to reduce by lifting the entire uterus through the vagina up to the level of the umbilicus. This position helps to correct it by the pull and tension on the ligaments. The palm of the hand gives steady pressure and manually replaces it. About two-third of the forearm might have to be placed in the vagina, and steady pressure kept up for about five minutes.

Simpler method to replace is O'Sullivan's method by hydrostatic pressure. It brings maximum success and carries no risk.

Case Report

Mrs. K. A. T. age 21 years was a primipara, married only three years back and had registered her name at the Maternity Hospital during her 7th month of pregnancy. The antenatal period was throughout very satisfactory, no untoward complications were noted. She had general weakness and had slight anemia. The blood count showed mild anaemia of iron

deficiency. She gave family history that her mother had complete prolapse of the uterus after her third delivery. She herself had no such complaint uptil now. But she used to get attacks of bronchial asthma on and off and cough was persistent.

She was admitted to the hospital for slight pains on 5th Sept. 1962, approximately 15 days before her due date. On examination her general condition was quite satisfactory and the pains went on gradually increasing. She was admitted at 9 A.M. and in the regular course, with normal progress of pains, membranes ruptured at 6 P.M. and she delivered at 8.4 P.M., thus 2 hours after the rupture of membranes. Her pains were not at all abnormal. Ten minutes after the expulsion of the child, hand was put on the fundus to express the placenta. At that time the uterus could not be felt from the abdomen but on slight pressure the entire placenta with the uterus seemed completely expelled out of the vagina. The placenta was attached to the fundus of the uterus. Within 5 minutes the patient got into a state of shock and her skin became cold and clammy. She turned completely pale. The blood pressure was 80/60, and pulse rate was more than 140 p.m. Glucose saline was started immediately to combat shock. Then attempt was made to replace the uterus along with the placenta which could not be done. The placenta was then removed from the fundus manually and further attempt was made to reduce the uterus, which was also unsuccessful. Her general condition started going downhill. The blood pressure was further lowered and the pulse rate increased up to 160 p.m. Oxygen and cortisone was then administered while glucose saline with methidrine was continuing. Her condition was a little better within a few minutes. After that further attempt was made under general anesthesia with complete relaxation to reduce the uterus. The patient was put in lithotomy position and draped. The inner surface of the uterus was cleaned with normal saline. Few pieces of membrane were removed. The inverted mass was then gradually manipulated and slowly reposition was tried with the hand and the palm. Continuous gentle pressure was applied on the fundus and after five minutes of continuous pressure the inverted mass gradually passed through the cervical ring. The rest of the reposition was carried out with the fingers in the uterine cavity. Inj. Methergin was given when the hand was in the uterus. The uterus contracted well.

The vagina or uterus was not packed. The torn perineum was repaired. Only self-retaining catheter was introduced in the bladder. Within a few minutes after replacement the condition of the patient improved satisfactorily. Her blood pressure was 100/70 mm. of Hg. and pulse rate was 130 p.m. The fundus of the uterus was very well felt per abdomen.

Broad spectrum antibiotics were given afterwards. 1500 c.c. of glucose saline in all was given. There was no extra bleeding per vaginam, Glycerine enema was given on the second day. Self-retaining catheter was removed on the third day. She was allowed to get out of bed on the seventh day after reposition.

Treatment for anemia was started and vaginal examination was done on seventh day which showed an intact cervix and a normally involuting anteverted uterus. On speculum examination, the cervix was seen to be quite normal.

Comment

It is a common belief that error of management is mostly responsible for acute inversion of uterus. The author's reported case depicts a picture of acute inversion which resulted without any undue manipulation. Possibly fundal insertion of placenta might be responsible for it, as that would increase the vascularity of fundus and diminish the tone of uterine musculature. The first nor second stage of labour was unduly prolonged nor was there any extra bleeding when the signs of shock appeared. It was not the abdominal examination which gave doubt for the condition but the detection of entirely inverted uterus with attach-

ed placenta in the vagina, frightened the attending midwife. Symptoms of shock appeared immediately and a quick replacement after taking steps for resuscitation, yielded the best result. Early detection and immediate replacement with complete relaxation under anesthesia seems to be of great advantage. Within counted few minutes the general condition of the patient improves.

It is desirable to note that spontaneous inversion can take place completely unware and prompt expert help is of great value in such an acute catastrophe.

Possibly administration of glycerine enema does not do any harm on second day after reposition. Methergin injection certainly helps to maintain the tone of the uterus and prevents further bleeding. A thorough examination and follow up is necessary to ensure that reposition is satisfactorily done.

Summary

A case of acute puerperal inversion is reported occurring spontaneously in a primiparous woman.

Comments have been made on its incidence, treatment and follow up.

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