East African Medical Journal Vol: 92 No. 12 December 2015
ACUTE PUERPERAL UTERINE INVERSION : CASE REPORT
C.M Mbaluka, MBChB, MMed(O/G) Pumwani Maternity Hospital and Kenyatta University, Department of Obstetrics/ Gynecology and L.O. Kumba, Obstetrician/ Gynecologist, Pumwani Maternity Hospital.

Request for reprints to: Dr. C.M Mbaluka , P.O Box 19651-00202 Nairobi

ACUTE PUERPERAL UTERINE INVERSION : CASE REPORT

C. M MBALUKA and L.O KUMBA

SUMMARY

Acute puerperal uterine inversion is a rare potentially life-threatening complication of the third stage of labour that should be expeditiously managed to avert maternal mortality. A 21-year primigravida who was admitted in labour had a spontaneous vertex delivery and her third stage of labour was complicated by uterine inversion. Manual repositioning of the uterus failed, but was successfully accomplished by Haltains surgical procedure. Prompt recognition and treatment is vital for successful management of acute uterine inversion.

INTRODUCTION

Uterine inversion is a rare obstetric emergency following vaginal delivery, which if not promptly recognised can lead to severe haemorrhage and shock, resulting in maternal death. It complicates 1 in 20,000 pregnancies, and mortality rates can be as high as 15% (1,2). The treatment options include use of pharmacologic agents, manual reduction, hydrostatic reduction and surgical procedures (1,2,3,4,5).

This article describes a case of a 21 year old primigravida admitted in labour at 39 weeks gestation who developed uterine inversion at delivery, and was successfully managed surgically through the Haultains procedure.

CASE REPORT

A 21 year old para 0 + 0 gravida 1 at 39 weeks gestation was admitted to the Pumwani Maternity Hospital on 16th October 2014 at 8.00am with complains of labour pains for 6 hours. She had not drained liquor and had good foetal movements.

She had had four antenatal visits at the Pumwani Maternity Hospital, where antenatal profile tests had been done. Her antenatal haemoglobin level was 12.8g%, HIV and VDRL tests were negative, her blood group O positive.

She had no significant past medical or surgical history. On examination, her general condition was fair and she was not pale. Fundal height was term, had a longitudinal lie, cephalic presentation with a descent of 1/5. Foetal heart rate was reassuring.

On vaginal examination she had a cervical dilation of 7cm with bulging membranes, no cord was felt and artificial rupture of membranes was done. Foetal heart rate was reassuring after membranes were ruptured.

A partogram was started and she had a vertex vaginal delivery two hours later. The placenta was delivered fifteen minutes later. The delivery was conducted by a nurse midwife.

However, after delivery of the placenta, a dark-reddish bleeding mass was noted at the introitus, and the patient was in agonising lower abdominal pain. Her blood pressure was 110/60mmhg with pulse rate of 120bpm.

The uterine fundus was not palpable on abdominal examination only a dimple was felt supra-pubically.

A diagnosis of uterine inversion was made, and the obstetrician on call informed.

Two intravenous line access were made and as normal saline infusion initiated, blood was taken for grouping and cross-matching, and the patient prepared for manual reduction of inversion and theatre. Twenty minutes later she was wheeled to the operating room.

In theatre the patient was put under halothane anaesthesia and positioned in lithotomy. Manual reduction was attempted by the obstetrician and successfully for twenty-minutes.

We then proceeded to do Haltains operation. Under general anaesthesia, pfannenstil incision was made and the abdomen opened in layers. We found the uterus inverted and proceeded to do a vertical incision on the posterior uterine wall, two fingers was inserted through the incision and the uterine fundus gradually lifted until the inversion was fully corrected. The incision was then repaired and haemostasis achieved.

Swabs and instruments were counted right and the abdomen closed in layers. Anaesthesia was reversed and the patient transfused three units of

packed cells. Subsequently there was minimal vaginal bleeding post-operatively, and the patient remained haemodynamically stable. She was discharged to the post-operative ward twelve hours later, and discharged home on the fourth day. She was well when reviewed two weeks post-operation.

DISCUSSION

Acute inversion of the uterus is an extremely rare but a life threatening complication of the third stage of labour, in which the uterus is turned inside out partially or completely. In an incomplete inversion, the fundus has inverted and lies within endometrial cavity without extending beyond the external o/c. When the fundus extends beyond the external os it is termed a complete inversion. Uterine inversion is termed acute if it occurs immediately after delivery before the cervix constricts, and chronic if noted four weeks after delivery (1).

The inversion may occur spontaneously or iatrogenically from mismanagement of the third stage of labour such as pulling the cord when the uterus is atonic, especially when combined with fundal pressure (1,2).

An inversed uterus poses danger to the patient due to haemorrhage especially after placental detachment. Shock, mainly neurogenic is also profound due to tension on the nerves from stretching of the infudibulopelvic ligament and the pressure on the ovaries they are dragged with the fundus through the cervical ring.

The diagnosis is mainly clinical with the patient experiencing acute lower abdominal pain which may be accompanied by a bearing down sensation. A depression may be palpable on the uterine fundus or the fundus may be absent. It is usually obvious on vaginal examination as a dark-red-blue bleeding mass palpable and/or visible at cervix, vagina or introitus.

Successful management depends on prompt diagnosis and treatment. Shock which is typically profound, and hypovolemia should be vigorously treated with fluid and blood replacement.
Repositioning of the uterus can be done manually or by hydrostatic method (4,5).

However if manual or hydrostatic methods fail, surgical repositioning is done at laparotomy. The Haultains procedure involves making a vertical incision on the lower segment directly posterior, then reposition the uterus by pulling from above or rarely pushing from below.

Fluid and blood replacement, antibiotics, careful monitoring are integral for successful perioperative management (1).

In conclusion, acute uterine inversion is a rare obstetric emergency whose successful management depends on prompt recognition and treatment. Aggressive initial resuscitation measures should be followed by repositioning the uterus manually, hydrostatically or surgically. Thus, it is paramount that physicians providing obstetric care be aware of its clinical presentation, to avert maternal mortality.

REFERENCES

1. John, T. R., Susan, M. R. and Venessa, A. B. Puerperal uterine inversion. Upto Date Articles, 2015
2. Witteveen, T., van Stralen G, Zwart J, van Roosmalen J. Puerperal uterine inversion in the Netherlands: a nationwide cohort study. *Acta Obstet Gynecol Scand,* **92**: 334.
3. Baskett, T. F. Acute uterine inversion: a review of 40 cases. *J Obstet Gynaecol Can*. **24**: 953.
4. Ogueh, O. and Ayida, G. Acute uterine inversion: a new technique of hydrostatic replacement. *Br J Obstet Gynaecol.* **104**: 951.
5. Tan, K. H. and Luddin, N. S. Hydrostatic reduction of acute uterine inversion. *Int. J. Gynaecol Obstet.* **91**: 63