

A RARE COMPLICATION OF THE COMPRESSION SUTURES IN THE MANAGEMENT OF PPH.

Obstetrics & Gynaecology

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ABSTRACT

Uterine atony is the most common cause of postpartum hemorrhage (PPH) which leads to maternal morbidity and mortality. Compression sutures are conservative surgical procedure for atonic PPH not responding to medical line of Management. The increasing development of assisted reproductive technology promotes the incidence of twin pregnancy in which uterine fibers will be overstretched resulting in difficulty in uterine fibers contraction and retraction after delivery, that is, uterine atony. The Hayman's compression Suturing was performed in a 30 year old primigravida with Twin gestation during emergency caesarean section along with B/L Uterine Artery and Ovarian Artery ligation. The women Developed postoperative hematometra and consequently pyometra not responded to antibiotic therapy. As a result the women underwent Peripartum Hysterectomy.

KEYWORDS

INTRODUCTION:

Atonic PPH is the most common cause of PPH, which is the leading cause of maternal mortality and morbidity. (1) The first line for management for atonic uterus is medical line ie. uterotonics. Majority of cases respond to it. However, few cases may require second line of management like uterine tamponade, stepwise devascularization of uterus and if this fails obstetric hysterectomy, which results in loss of future fertility. Development of compression suture technique has proved to be effective in the control of massive Atonic PPH not responding to medical management is an alternative to hysterectomy when timely applied. [2] Surgical method of controlling uterine bleeding by inserting B- Lynch suture has been developed to reduce the incidence of emergency hysterectomy and to preserve fertility in these patients. Because of simplicity of application and less time taken to put the modified B-Lynch stitch, it should be the preferred choice [3] Uterine compression sutures are very effective in the management of atonic PPH around 95-98% but rarely can cause complications like hematometra, pyometra, Asherman's syndrome, uterine necrosis. [4] The risk of postpartum haemorrhage in women with twin pregnancy is significantly increased and is reported to be 2.26 to 4 times higher than that of women with singleton pregnancy according to some studies [5-8]; additionally, the risk of severe postpartum haemorrhage is reported to be 2.11 times higher [4]. The most appropriate uterine compression suture for each patient should be determined based on the site and the cause of uterine bleeding, and also depends on the surgeons expertise like b lynch, Hayman's, cho suture etc. These uterine compression sutures can cause complications like Hematometra, Pyometra, Asherman's syndrome, ischemia, uterine necrosis.

We would like to report a case of Peripartam Hysterectomy done in a women for hematometra consequently leading to pyometra and uterine subinvolution developed as a complication of compression sutures along with B/L uterine artery ligation and B/L ovarian artery ligation done for atonic PPH during emergency caesarean section.

Case Report:

A 30-year old primigravida with overdistended uterus with 2 fetus gestational age around 36-37 weeks with non severe pre-eclampsia with DCDA twin pregnancy reported to our hospital with premature

rupture of membranes. On examination, abdomen was overdistended with 1st fetus podalic presentation and 2nd by cephalic presentation with normal foetal heart rate in labour. Investigations Hb – 11.6gm% with normal platelet and WBC count. Women underwent emergency LSCS for Twin pregnancy with 1st by Breech Presentation in labour. Intraoperatively, there was atonic PPH, 1st medical line of management was given which was not successful, so immediately surgical intervention in the form of B/L uterine and ovarian artery ligation, hayman's suture was taken. Resuscitated with blood products and higher antibiotics. Monitored for vitals postoperatively as per standard operating protocol.

In the postop period women had distention of abdomen with increasing abdominal girth. On post operative day 12, women had P/V bleeding and On & Off fever spikes 1-2 per day showing stepladder pattern. On P/V Os was open with foul smelling vaginal discharge. High vaginal swab and Urine culture and sensitivity reports were found to be normal. CT abdomen pelvis (Fig 1) suggestive of Uterus 11.8-20-15cm size, grossly bulky with oedematous wall of maximum thickness 2.5cm with moderate free fluid in pelvis, endometrial collection of approx volume 250cc, mild to moderate distension of bowel loops with small bowel obstruction and gross hydronephrosis and hydroureter.

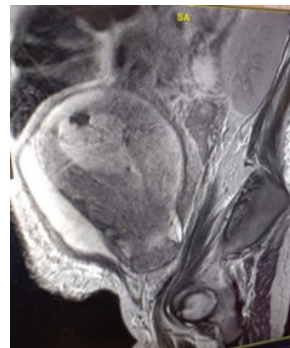


Fig.1 CECT scan image showing endometrial collection, distended bowel loops.

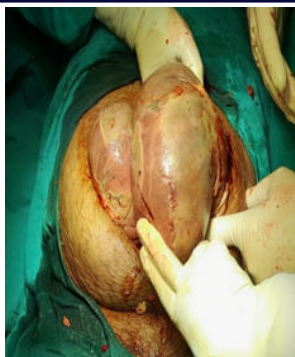


Fig.2 Enlarged uterus with compression Sutures in situ with signs of ischemia and necrosis.

As patient did not respond to higher antibiotics and had constant episodes of fever and CT scan was s/o distended uterus and bowel loops hence Decision of Emergency Exploratory Laparotomy, Intraoperatively compression suture was cut and draining of hematopyometra was tried to drain the content vaginally, but content could not be drained as the contents were in semisolid state with septations. Therefore considering severe necrosis, severe sepsis peripartum hysterectomy decision was taken. Intraperitoneal foul smelling collection aspirated of approx 200cc sent for culture and sensitivity. Uterus was found to be subinvolved and E/O single tight loop of Hayman's suture at the Centre of uterus with (Fig 2) On gross

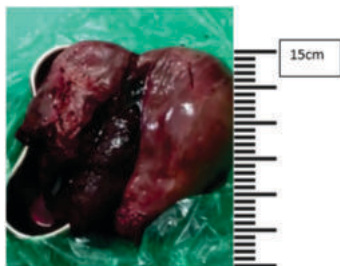


Fig.3 Dissected Specimen of Uterus showing Hematometra

appearance, uterus appeared pale with thick necrosed walls and thrombosed blood vessels. Hysterectomy was done by cutting tubo-ovarian and uterosacral ligaments and there was no need of uterine artery ligation as the vessels were thrombosed. (Fig 3) Moderately distended bowel loops were traced and there was no evidence of injury, ischemia or perforation. Intraperitoneal drain was kept and abdomen was closed in layers. Women was monitored in Intensive care unit postoperatively and later shifted to ward for further management. Women was very anxious and psychologically disturbed, mother and her relatives were advised to keep her twin babies besides her and continue with breast feeding which improved the mental status of the mother. Mother of 2 babies improved significantly and was happily discharged.

DISCUSSION:

The management of postpartum hemorrhage must be as fast, simple, and conservative as much as possible in golden hour. In case of failed medical treatment, the use of surgical procedures as compression suture is recommended. Due to ease of implementation, B – Lynch suturing for uterine atony has been disseminated worldwide. The suturing technique involves a pair of vertical brace sutures around the uterus, essentially to opposite anterior and posterior uterine walls. These compression suture work by direct application of pressure on the placental bed bleeding and by reducing the blood to uterus. Several case reports have reported uterine ischemic necrosis as complication after B-Lynch sutures (Gottlieb, Joshi, Ochoa, Treloar, and all their colleagues). (7) Fotopoulou and Dudenhausen suggested that the combination of compression sutures and additional vessel ligation was more often associated with complications than was the use of compression sutures alone, probably because of the development of uterine ischemia and inflammation. (8) In this case, there is a possibility that as the compression sutures were taken by polyglactin and also were too tight and did not allow the collection in the uterus to get drained which led to hematometra consecutively lead to pyometra, uterine ischemia, necrosis and subinvolution of uterus. Chromic catgut should be used and compression suture should not be

too tight that it would compromise the drainage of collection and also cause uterine ischemia and necrosis. Hysterectomy was mandatory in this case as otherwise she would have landed up in septicemia and would have added to an unfortunate maternal mortality. Although the compression suture is very successful in preventing the need for hysterectomy during intractable PPH unresponsive to medical management, the effects of compression suture on future fertility potential require further investigation. Although isolated case reports of successful pregnancies are reassuring, patients and physicians need to be aware of the potential complications and preventive measures. Failures and short and long-term consequences of compression sutures need to be reported. Careful follow-up of women in whom compression sutures are performed will help in detecting various complications. The success rate of uterine compression sutures depends on various factors, including the patient's hemodynamic stability, the severity and duration of the hemorrhage, the experience of the surgeon and staff, and the availability of blood and blood products. It has been suggested that B Lynch suture may cause defects in the anterior wall of the uterus. Thus, excessive folding of the uterine wall due to suture compression may have unpredictable effects on the uterine myometrium and endometrial vessels. Considering these adverse outcomes, which are very rare which could be avoided by proper suture material, suture technique and post operative vigilance.

CONCLUSION:

With intractable uterine atony unresponsive to the medical measures, surgical intervention can be lifesaving. Compression sutures like B Lynch and its modifications can help preserve the child bearing function. However, this procedure is associated with own risks, hence timely decision, appropriate patient selection, proper technique and proper suture material and postoperative vigilance for associated complications is of utmost importance.

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