



# Early Uterine Necrosis due to Modified B-Lynch Suture

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## Abstract

B-lynch compression sutures, applied as a life-saving procedure in cases of atonic postpartum haemorrhage can sometimes lead to life-threatening complications. We report a case of early uterine necrosis following B-lynch compression suture application for PPH at the time of LSCS, resulting in peripartum hysterectomy.

**Keywords** Atonic PPH · Compression sutures · Uterine necrosis · Peri-partum hysterectomy

## Introduction

Atonic PPH can turn into a life-threatening condition if not promptly managed. Conservative modalities like uterotonics, uterine tamponade, stepwise devascularisation and compression sutures alone or in combination can not only save the patient's life but can also avert the need for peripartum hysterectomy.

## Case

A 20-year-old female, P<sub>3</sub>L<sub>3</sub>, was referred to our tertiary care hospital on 23 /09 /16 on post-operative Day 3 of LSCS (done for obstructed labour) with severe anaemia with uterine collection with suspected sepsis, for further management. Per operatively, she had atonic PPH which was managed with uterotonics, bilateral uterine artery ligation along with B-lynch compression suture application. On post-op day 2, patient developed abdominal distension along with rise in fundal height of uterus up to 32 weeks size. Her pallor

increased and general condition deteriorated and was thus referred.

Urgent USG in our hospital revealed multiple intramyometrial hematomas, largest one localised in left-sided myometrium; cavity was empty with minimal free fluid in the peritoneal cavity. Patient was taken up for exploratory laparotomy, in view of uterine haematoma with suspicion of extension to broad ligament.

Per operatively, uterus was enlarged, congested, flabby, bluish black in appearance. B-lynch sutures were in situ and uterus was distended in between compression sutures giving it a lobulated appearance (Fig. 1).

Another circumferential stitch was seen at the level of internal os encircling both round ligaments and infundibulopelvic ligaments (Fig. 2).

Both ovaries were congested bluish black in colour and appeared to be necrosed. As there was no viable tissue even on cut section of ovaries, total abdominal hysterectomy with bilateral salpingo oophorectomy was performed, after consent (Fig. 3). Adequate blood transfusion was given.

On cut section of uterus, decidua was necrosed, and myometrium was oedematous, grossly thickened and filled with blood clots. Decidual culture showed growth of MRSA sensitive to teicoplanin. Her general condition gradually improved. On histopathology, uterus, bilateral ovaries and fallopian tubes showed marked congestion and haemorrhage with only scant viable tissue identifiable. Findings were suggestive of gross necrosis.

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**Fig. 1** Pale lobulated uterus with brace sutures in situ



**Fig. 2** Circumferential suture

## Discussion

The B-lynch technique of a “belt and braces” uterine compression suture was described in 1997 as a conservative surgical procedure to control PPH. It involves a pair of vertical brace sutures around the uterus, essentially to oppose the anterior and posterior walls, thereby applying pressure on



**Fig. 3** TAH with BSO specimen showing necrosed ovaries and lower uterine segment

the placental bed bleeding and thus reducing it. The tension is probably critical to success.

These sutures though very effective aren't without complications. Too tight sutures, especially if combined with uterine artery or hypogastric artery ligation, may compromise the blood supply of the uterus and lead to ischemic necrosis. Compression sutures if applied in cases prone for chorioamnionitis may have an underlying septic foci and infectious process leading to uterine necrosis as in our case. Partial ischaemic necrosis of uterus has also been described by Satia et al. [1]. Other complications that have been reported are Pyometra and Uterine synechiae leading to Asherman Syndrome [2]. To decrease these complications, a novel approach of removable brace suture has been also described recently [3].

Many authors have tried modifications in the brace suture to incorporate compression of uterine vessels thereby increasing effectiveness for controlling PPH [4]. El-Sokkary et al. described a modification of classical B-lynch suture with better success wherein the suture had a transverse component compressing the bilateral uterine vessels also [5]. In our case, a similar attempt was made whereby a circumferential compression suture at isthmus was also applied in

addition to vertical B-lynch suture which probably compromised the vascular supply of uterus leading to early ischaemic necrosis presenting within 48 h.

## Conclusions

Potential complications and consequences of compression sutures are to be given a thought before adopting them routinely and must be used judiciously and correctly. Failures, short- and long-term consequences of compression sutures must be reported so that data on efficacy and safety of these techniques can be accumulated which may help in improving the technique and increasing the success rate.

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## Compliance with ethical standards

**Conflict of interest** There are no potential conflicts of interest.

**Human and Animal Rights** The manuscript submitted is a short commentary of case and does not involve any research on human participants and/or animals.

**Informed Consent** Informed consent for publishing it has been taken.

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