

## Balloon tamponade in the management of uterine perforation following a late (16 weeks) termination of pregnancy

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### Introduction:

Uterine perforation is an uncommon, but potentially serious complication during surgical termination of pregnancy. Factors include previous caesarean section, infection and uterine anomalies<sup>1</sup>.

Common perforation sites include the anterior uterine wall (40%) and the cervical canal (36%).<sup>1</sup> Prompt recognition is paramount in order to minimise the potential risk of bleeding, but also to identify other visceral damage.

**Initial Presentation:** A 32 year old woman G4P1 including a previous LSCS, 16<sup>+</sup>5weeks gestation, singleton pregnancy, presented to a private termination of pregnancy facility for surgical termination of pregnancy.

Following the use of misoprostol, there was an initial attempt for a suction curette under ultrasound guidance. However, bleeding ensued before the uterine cavity was evacuated. It was suspected that a uterine perforation had occurred. The patient was subsequently transferred to a public hospital with an estimated 2000mls blood loss and a Bakri balloon within the uterine cavity.

**Hospital admission:** Following stabilisation in the emergency department requiring oxytocics, inotropes and activation of a massive blood transfusion protocol, the patient was transferred to the operating theatre with a suspected uterine perforation resulting in massive blood loss.

**Theatre:** A midline laparotomy was performed whilst the patient was in the Lloyd Davis position to allow access to the vagina and the abdominopelvic cavity simultaneously. However, there was no blood seen in the peritoneal cavity.

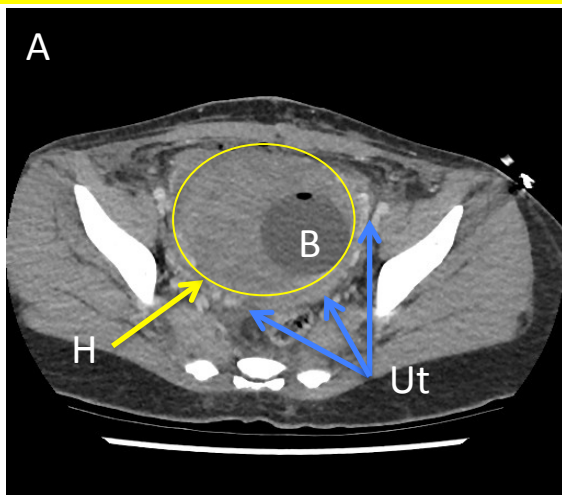
Although there was no haematoma of the broad ligament, there was a 6cm diameter swelling of the right side of the uterovesical fold. This purple-blue coloured mass suggested a large haematoma.

The Bakri balloon was removed and a uterine suction curette was performed under direct vision and palpation of the uterus and cervical canal to ensure the correct intra uterine placement of the curette. However, following confirmation of the empty uterine cavity using a blunt curette, bleeding continued.

A decision was made not to perform a hysterectomy but insert a 22F Foley balloon, inflated to 60mls, to control the ongoing haemorrhage. This allowed resuscitation of the patient and provided an opportunity to return to theatre, if necessary, to perform a hysterectomy.

Total blood loss was now 3800mls.

The patient was subsequently admitted to intensive care.



**Intensive care:** The patient received a total of 6 units of packed red blood cells, 5 units of fresh frozen plasma, 2 units of cryoprecipitate and 100mls platelets. Post transfusion Hb was 103g/L from a preoperative Hb of 64g/l. Coagulation profile parameters remained normal despite the excessive blood loss.

A CT scan (Image A) identified a right-sided 9cm intramyometrial haematoma (H) that displaced the uterine cavity (Ut) to the left. (Note the intrauterine Foley balloon (B) deviated to the left).

Output from the Foley balloon was minimal until its removal on day 2 post op. The patient received 1g IV Cephazolin QID and 500mg IV Metronidazole BD for 48 hours and the woman was discharged on Day 4.

**Follow up:** The identified haematoma has been reducing in size over a 6 month follow-up period. It is currently 3cm and the patient remains well. On complete resolution a HSG is planned to delineate the uterine cavity.

### Discussion

1. Uterine perforation can be a life threatening condition that may necessitate a hysterectomy<sup>2</sup>
2. Laparotomy findings may indicate a perforation that has not breached the uterine serosa
3. Balloon tamponade technology<sup>3</sup> may be used to control bleeding following perforations that have not breached the uterine serosa.

### Conclusion:

Balloon tamponade technology may be used with other surgical interventions during uterine perforation secondary to surgical termination of pregnancy.

### References:

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