The Bleeding Edge:
A case of severe PPH with a total 5L blood loss

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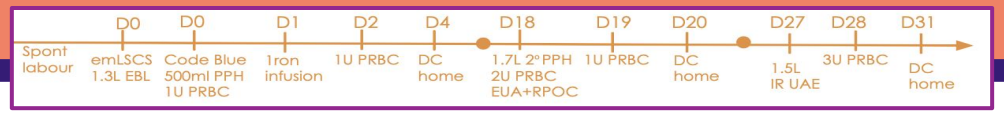

Background

Postpartum Haemorrhage (PPH): blood loss greater than 500mL, occurring primarily (within 24hrs of birth) or secondarily (up to 6 weeks postpartum) remains a significant obstetric compilation and leading cause of maternal morbidity and mortality. Incidence across Australia has been increasing now approx. 12-15%. In 2022 severe PPH (> 1L) occurred in 7% of all births in NSW. Physiology of tone, trauma, tissue and thrombin causing PPH is well understood however risk stratification remains challenging.

Aim

The aim is to review a case of primary and multiple multifaceted secondary PPH.

Discussion

This is a unique case of multiple primary and secondary PPH, highlighting the challenges of PPH risk stratification and management. The global rise in PPH rates can be attributed to increasing caesarean and instrumental birth, maternal age and BMI along with significant comorbidities. In this case this woman had minimal risk factors with no history of PPH or coagulation disorder, was not of AMA, did not have prolonged labour or oxytocin. All four occurrences of bleeding (intraoperative trauma, tone, tissue and AVM /aneurysm) were recognised early and escalated urgently. Cases such as this continue to utilise significant healthcare resources (figure 1.) so it remains important for us to address the ongoing increasing rates of PPH both for patient safety and to protect our health care resources.

- 5L blood loss
- 8U PRBC
- 1 iron infusion
- 1000mcg ergometrine
- 3g TXA
- 80U Syntocinon
- 800mcg misoprostol
- carbetocin

Figure 1. Total Resources used.

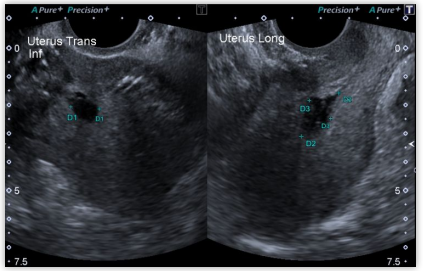

Image 1. Right uterine artery aneurysm

Case

This case describes a G3P1 low risk woman with no significant medical history. Antenatal history included a previous term ventouse birth 10 years prior and diagnosed breech at 31 weeks during the current pregnancy.. Following unsuccessful ECV and counselling she elected for a vaginal breech birth. She presented in spontaneous labour and proceeded to full dilatation.

Primary PPH: Trauma

She had an emergency caesarean for fetal distress and slow progress in the second stage which was complicated by a right broad ligament extension requiring suturing and surgicel for haemostasis. Her EBL was 1300mL due to trauma.

Primary PPH: Tone

D0 post emLSCS she had a code blue for hypotensive shock and 500mL vaginal bleeding due to tone requiring multiple uterotonics, tranexamic acid, fluid replacement and 1U blood transfusion to good effect. She received an iron infusion (D1) and further 1U blood transfusion (D2) for symptomatic anaemia and was discharged home D4 postpartum.

Secondary PPH: Tissue

At 2.5 weeks postpartum she presented to emergency with 1.7L vaginal bleeding and hypotensive shock requiring resuscitation, vasopressors and transfer to theatre for removal of calcified products with haemostasis at completion. She received a further 3U blood transfusion this admission and was discharged home D2 post EUA/ERPC with a course of antibiotics.

Secondary PPH: Uterine Artery Aneurysm

At 4 weeks she represented with recurrent vaginal bleeding (1.5L) with no products on pelvic ultrasound. Her bloods including coagulation profile remained normal with no evidence of infection. She continued to bleed despite uterotonics and was ultimately taken to Interventional Radiology for bilateral uterine artery embolisation at which time a right uterine artery aneursym was detected. She once again was successfully discharged home with antibiotics and remained stable.