Secondary PPH

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45.1 Introduction

Postpartum haemorrhage is the most common cause of maternal mortality worldwide. Most cases of morbidity and mortality due to PPH occur within the first 24 h of delivery. However, the jeopardy of PPH is rising with the secondary form of PPH occurring between 24 h and 12 weeks postpartum, when the woman is already discharged home. As what has been reported by many studies, women presenting with secondary postpartum haemorrhage usually do so during second postpartum week, with the next largest proportion during the third week. In developed countries, secondary postpartum haemorrhage occurs in <1–2% of pregnancies.

45.2 Definition

Postpartum haemorrhage can be divided into two categories. Primary postpartum haemorrhage is defined as blood loss equal to or greater than 500 mL within the first 24 h after birth. Blood loss greater than or equal to 1000 mL is labelled as severe postpartum haemorrhage. Secondary postpartum haemorrhage is defined as any abnormal and excessive bleeding from the birth canal occurring after 24 h and 12 weeks postnatally [1]. It is much less common than primary PPH, occurring in about 1% of deliveries. The majority of cases occur within 3 weeks of delivery. The amount of bleeding is usually less than primary PPH. Definition of secondary PPH does not include volume of blood loss or the condition of women, it may vary from mild inconvenience to fatal.

45.3 Causes

The four main causes of secondary PPH can be summarized as 4 'T's which include tissue (retained placenta, placenta accreta), tone (atonic uterus, subinvolution at placental site), trauma of genital tract (vaginal, cervical laceration, uterine rupture or vulval haematoma) and thrombogenic disorders (Von Willebrand's disease, carrier of haemophilia A or B, factor XI deficiency or use of anticoagulants, e.g. warfarin). Extremely rare causes also have to be considered, including trophoblastic disease, chronic uterine inversion and the development of false aneurysm or arteriovenous fistula at the site of a healing caesarean section scar [2]. Placental site vessel subinvolution is also one of the rare causes of secondary PPH, and this situation is frequently underdiagnosed by clinicians.

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45.4 Risk Factors

Risk factors for PPH include grand multiparity, multiple gestation, preeclampsia, IUGR, previous spontaneous miscarriage or retained placenta in previous pregnancies. The conditions associated with abnormal maternal trophoblastic interactions have higher tendency of retained products and secondary PPH [3]. Immediate PPH is a risk factor for secondary PPH. Hence, it is likely that risk factors for primary PPH are also risk factor for secondary PPH.

45.5 Diagnoses

Secondary PPH is a diagnosis of exclusion. It usually presents 7–14 days after delivery and may present as slight to excessive bleeding. Small amount of bleeding may persist for several weeks after delivery; therefore some bleeding defined as secondary PPH may be normal [4]. It is important to exclude normal resumption of menstrual period after childbirth, common side effect of hormonal contraception given during this period.

45.6 Management

The management of patient with secondary PPH includes stabilization of patient and investigation for cause. If the bleeding is mild and settling, the uterus is not tender and is appropriately involuted, there are no other signs of sepsis, initial observation is justified. Ultrasound may help this decision if it suggests that the uterus is empty and without retained placental tissue. In the patients with heavy bleeding or signs of sepsis, the primary treatment includes uterotonics and antibiotics. Surgical intervention is only needed in the patients where bleeding is uncontrolled and should be done after appropriate antibiotic cover for at least 24 h [5].

Detailed history should be taken regarding antenatal high risk factor, obstetric history, labour events, mode of delivery, intrapartum or postpartum complications and postpartum contraception, history of fever, pain in the abdomen and amount of bleeding. Antenatal and delivery records should be checked. It is important to know the place of delivery, especially in low-resource areas as the deliveries conducted at home are more often associated with retained placenta and endometritis.

Examination includes temperature, pulse and blood pressure, clinical assessment of anaemia, abdominal distention, uterine involution, tenderness and tone, amount of bleeding, foul-smelling lochia, healing of episiotomy or perineal tear. The lower genital tract and cervix should be carefully inspected under anaesthesia for any laceration and discharging haematoma. Complete haemogram and high vaginal swab should be sent for investigation. Ultrasound is helpful in diagnosing retained product of conception; however, it may not be accurate, so it should be overruled by clinical consideration. If the bleeding is mild and settling and there are no signs of sepsis, initial observation is justified. The patients with heavy bleeding, subinvoluted uterus and signs of sepsis require intravenous fluid replacement with crystalloid, uterotonic drugs and broad-spectrum antibiotics to cover gram-positive, gram-negative and anaerobic organisms. Patients with anaemia or heavy bleeding may also require blood transfusion.

In case of retained placental tissue (found in 1/3 of cases), uterine exploration under anaesthesia is required after antibiotic cover. Usually the cervix is open enough to admit finger and uterine cavity can be explored. The products can be removed by sponge forceps followed by gentle suction curettage. However, since puerperal uterus is soft, it is prone to perforation. The tissue removed should be sent for culture and sensitivity as well as histopathology to rule out trophoblastic disease [6].

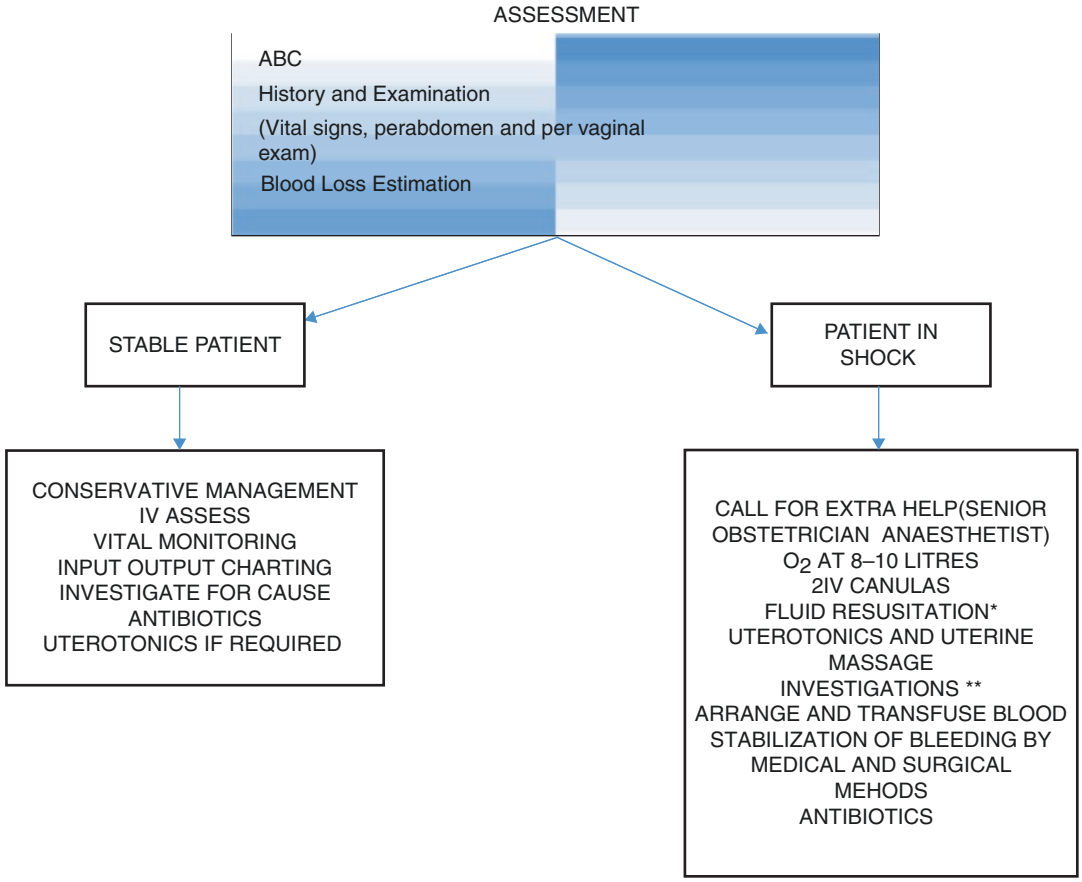
Secondary PPH from dehiscent lower segment caesarean section incision is certainly a rare condition. The possible causes as mentioned in the literature can be defective drainage leading to marked uterine distension followed by dehiscence or infection. Uterine packing is done to

control the haemorrhage; however, it is associated with recurrence of bleeding after removal of pack. Supravaginal hysterectomy is definitive and the safest treatment in such rare cases.

Various studies have shown that conservative medical approach for secondary PPH is superior to surgical treatment as the letter is associated with increased rate of secondary infertility.

45.7 Conclusion

Secondary postpartum haemorrhage occurs in just 1% of women, is associated with primary postpartum haemorrhage and retained placenta and may result in significant maternal morbidity. This problem deserves more attention than it has received in recent years.



Secondary PPH Flow Chart

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