



Clinical Practice Guidelines: Obstetrics/Primary post-partum haemorrhage

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Primary post-partum haemorrhage

February, 2021

Primary post-partum haemorrhage (PPH) is commonly defined as blood loss of greater than 500 mL from the genital tract in the first 24 hours following delivery.^[1] It is the leading cause of pregnancy related mortality in low-income countries and the cause of 25% of all maternal deaths globally.^[2]

Post-partum blood loss is commonly underestimated and symptoms suggestive of PPH may be initially detected by the presence of abnormal vital signs indicating haemodynamic instability.^[3] Clinical signs of shock may not manifest until considerable blood loss has occurred.

Vigilance is required to recognise the signs of a deteriorating patient and accurate appraisal of both apparent and concealed blood loss.

The primary physiological management of PPH is to encourage uterine contraction. The aim is to achieve constriction of the blood vessels supplying the uterus to achieve clot formation and haemostasis.^[4]

Applying basic techniques including fundal massage, encouraging the birthing parent to empty their bladder and the appropriate administration of pharmacological agents are the foundation of pre-hospital management.^[1-4]

Risk factors of primary PPH:^[3]

A large number of risk factors for PPH have been identified, however most cases have no identifiable risk factors present.^[3] PPH should be considered and carefully monitored following delivery.

- Antenatal
 - Previous history of post-partum haemorrhage
 - Anaemia
 - Age greater 35 years
 - Multiparity
 - Prior uterine surgery, including caesarean section
 - Pre-eclampsia and HELLP syndrome – these interfere with liver enzymes which in turn interferes with clotting factors.
 - Obesity
 - Uterine anomalies, including fibroids
 - Abnormal placentation
 - Multiple pregnancy
- Intrapartum
 - Expedited second stage
 - Prolonged second stage
 - Prolonged third stage greater than 30 minutes
 - Macrosomia (large baby)
 - Polyhydramnios (excess amniotic fluid)
 - Infection/Prolonged rupture of membranes.

Clinical features



- PV bleeding greater than 500 mL after vaginal delivery
- Hypovolaemic shock
- Poor fundal tone / fundal tone above the umbilicus

Risk assessment



- Research indicates that clinical reports of blood loss are frequently underestimated.
- Because of the normal physiology of pregnancy, birthing parents are often able to tolerate significant volume losses before clinical deterioration.
- Most cases of primary PPH have no identifiable risk factors.^[5]
- Delay in primary PPH treatment is associated increased haemorrhage severity.

+ Additional information

- Fundal massage must only be performed **after** the placenta has been delivered.
- Blood flow to the placental bed is approximately 750 mL/minute at term.^[4]
- All birthing parents should be offered modified active management of the third stage of labour, as it is thought to decrease the likelihood of primary post-partum haemorrhage by 50%.
- The patient's legs must not be raised in the event of hypotension, due to the risk of concealing further haemorrhage.
- Signs of haemodynamic compromise do not generally manifest until substantial bleeding (1500 mL or more) has occurred.
- The early recognition and immediate management of PPH is critical – 90% of deaths will occur within 4 hours of birth.
- In an active PPH the ambulance clinician's objective is to **'Manage the Ts'**^[4]
 - **Tone** (70%) – uterine atony
 - **Trauma** (20%) – cervical and genital tract damage during delivery
 - **Tissue** (10%) – retained products
 - **Thrombin** (less than 1%) – coagulation disorder
 - **Theatre/Transport** to surgical facility

