Clinical Practice Guidelines: Trauma/Trauma in pregnancy

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Trauma in pregnancy

Trauma affects approximately 7% of pregnancies and can cause premature labour, placental abruption, foeto-maternal haemorrhage and foetal demise.[1] Even seemingly minor injuries can be dangerous.

Approximately half of the trauma experienced in pregnancy is secondary to road traffic crashes (RTCs), with falls, assaults and burns occurring less frequently.[2]

Clinical features

Specific trauma related injuries of pregnancy

- Premature labour
- Placental abruption:
  - Shearing forces from deceleration injuries can separate the placenta from the underlying uterine wall, causing an abruption. It occurs in 1–5% minor trauma in pregnancy and in 20–50% major trauma.[1] Importantly it can have a delayed manifestation 24–48 hours after the initial injury.
- Uterine rupture:[2]
  - Uterine rupture is a rare but devastating traumatic complication. It should be suspected if there is maternal shock, difficulty defining the uterus on palpation or if there are easily palpable foetal parts.

Clinical features *(cont.)*

- Foeto-maternal haemorrhage[1]
- Foeto-maternal haemorrhage refers to the spread of foetal blood into the maternal circulation which can lead to Rhesus sensitisation in the mother. This has implications for further pregnancies.

Risk assessment

Important physiological changes occur in pregnancy which impact on maternal and foetal risk in trauma.

Maternal risk

- Blood volume increases approximately 45% approaching term – this relative hypervolaemia can mask haemorrhagic shock. Up to 35% of maternal blood volume can be lost before signs of haemorrhagic shock appear.[1]
- The diaphragm rises approximately 4 cm in the later stages of pregnancy, with a reduction in residual lung volume.[1] There is a relative reduction in respiratory reserve in these patients.
- Delayed gastric emptying and the displacement of intra-abdominal organs by the growing foetus increases the risk of aspiration.[1]

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Definitive care

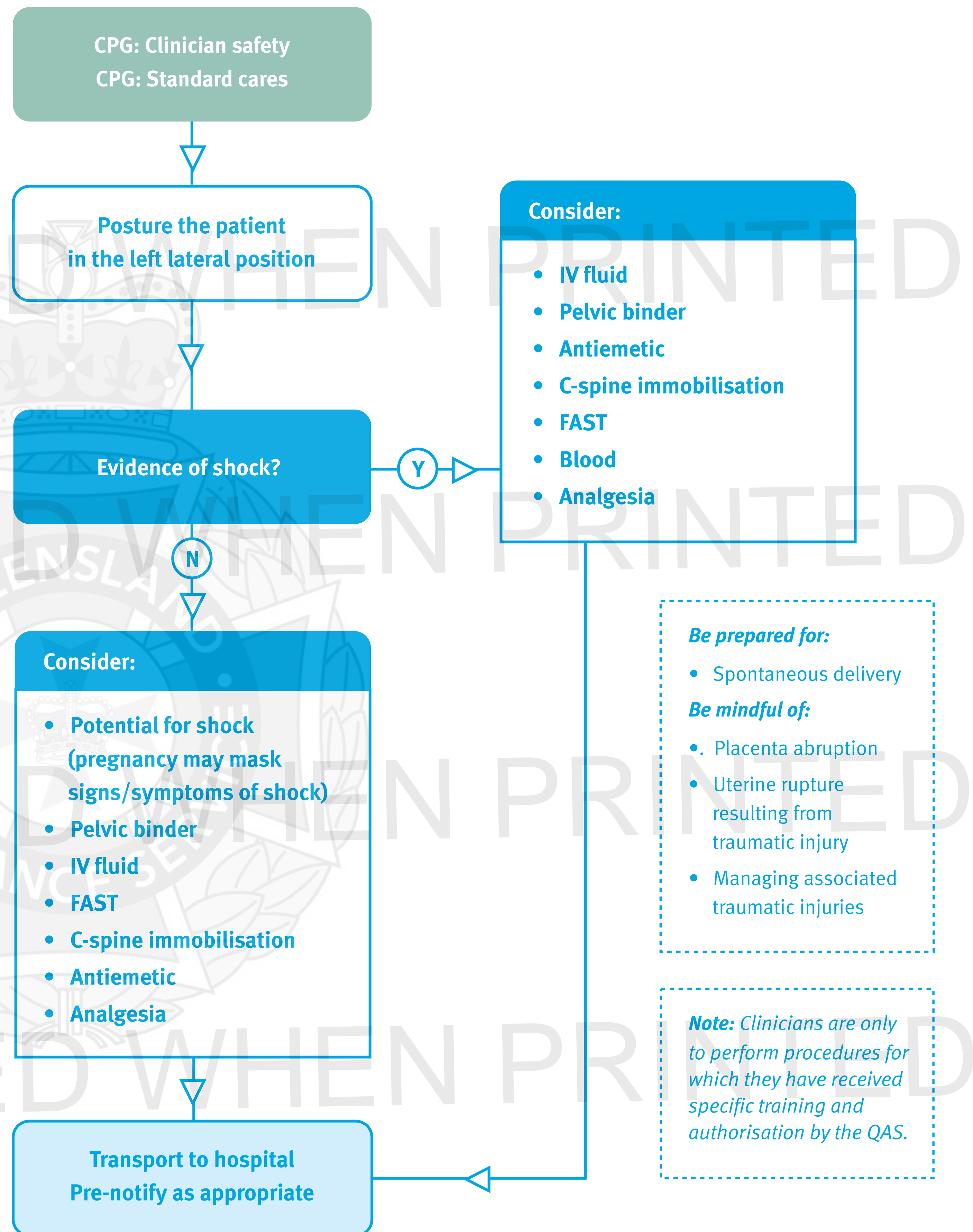
The seriously traumatised pregnant patient requires a multidisciplinary approach, including an urgent obstetric opinion and possibly a caesarean section.[1]

Pregnant patients suffering minor trauma are typically monitored in the labour ward for a minimum of four hours to detect occult placental abruption.

Anti-D immunoglobulin is administered to Rhesus-negative mothers to prevent foeto-maternal isoimmunisation.[1]

Additional information

- Maternal heart rate can be expected to increase by 15–20 beats per minute in the later stages of pregnancy.[1]
- Maternal BP lowers by 10–15 mmHg during the 2nd trimester and tends to normalise at term.[1]
- Position pregnant patients with left lateral tilt to avoid aorto-caval compression.
- Consider mechanism of injury including:
  - direct abdominal trauma
  - improper application of lap belt.
- A focused obstetric history should include:
  - gestational age
  - presence of foetal movements
  - PV loss.



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