Clinical Practice Guidelines:
Trauma/Trauma in pregnancy

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Date
February, 2015

Purpose
To ensure a consistent approach to the management of Trauma in pregnancy.

Scope
Applies to all QAS clinical staff.

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Review date
February, 2017

URL

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**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.

**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.\(^1\)

**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.
**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.

**Consider resuscitation:**

- IV fluid
- Pelvic binder
- Antiemetic
- C-Spine immobilisation
- FAST
- Blood
- Analgesia

**Note:** Officers are only to perform procedures for which they have received specific training and authorisation by the QAS.

**Consider:**

- Potential for shock (pregnancy may mask signs/symptoms of shock)
- Pelvic binder
- IV Fluid
- FAST
- C-spine immobilisation
- Antiemetic
- Analgesia

**Be prepared for:**

- Spontaneous delivery

**Be mindful of:**

- Placenta abruption
- Uterine rupture resulting from traumatic injury
- Managing associated traumatic injuries

**Transport to hospital**

Pre-notify as appropriate