Victorian State Trauma System

Obstetric Trauma

RAUMA VICTORIA

Make early contact with ARV for advice from the major trauma services and to initiate retrieval.

- Fetal survival depends on effective maternal resuscitation.
- Maternal position – 1 or 2 handed manual uterine displacement or left tilt 15-30*.
- Maternal hypovolaemia will significantly impact on fetal outcomes.

Early Activation

- Gather vital information
- Activate Trauma Team
- Designate roles
- Set up to receive patient
- Ensure safety using PPE

Primary Survey

AIRWAY / C-SPINE

- Protect Airway
- Be prepared for difficult intubation
- Maintain full spinal precautions if indicated

BREATHING

- Identify and treat any life threats
- Assess RR, work of breathing, SpO_2 & symmetry
- Oxygen therapy to maintain SpO_2 94% - 98%
- $ETCO_2$ monitoring if ventilated
- Intercostal Catheter should be inserted 1-2 rib spaces higher

CIRCULATION

- Position patient with manual left uterine displacement or tilt if > 20 weeks gestation
- Insert x 2 large bore IV cannulas & commence fluid resuscitation if required
- Assess HR/BP/Cap refill
- Identify and control source of haemorrhage

DISABILITY

- Assess level of consciousness
- Check pupils
- Check BSL

EXPOSURE / ENVIRONMENT

- Fully expose patient
- Prevent heat loss
- Log roll

ADJUNCTS

- Ultrasound / CTG monitoring
- X rays: Chest, Pelvis
- Take blood: Hb, Group & X-Match, coagulation studies
- 12 lead ECG
- Consider IDC
- Orogastric tube if intubated

Does patient meet potential Major Trauma criteria for Inter-hospital transfer?

N

- Monitor closely
- Perform secondary survey
- Observe in facility for at least 2 hours
- Provide required care, discharge and follow up as necessary

Y

Notify ARV to conduct case assessment

Patient meets potential major trauma criteria?

N

- Perform complete trauma evaluation including secondary survey
- Obtain an early and accurate obstetric history
- Assess fetal well being
- Perform cervical exam if qualified obstetric staff available
- Take advice from MTS via ARV coordinators
- Make early contact if any deterioration in patient's condition occurs

Y

- Prepare patient for retrieval and definitive care
- Optimise oxygenation
- Continue fluid resuscitation
- Continuously monitor patient
- Assess fetal well-being
- Commence secondary survey if time allows
- Ensure clear, accurate & concise documentation
- Seek advice from MTS via ARV
- Communicate any new clinical developments or significant deterioration
- Support family and friends

PERIMORTEM CAESAREAN SECTION is indicated where the mother is in cardiac arrest with a fetus of > 20 weeks gestation. In these cases, caesarean section is performed to help restore circulating volume to the mother and fetal survival is not the primary indication. Rarely, where complications of trauma indicate that maternal survival is unlikely and the fetus is > 24 weeks gestation, a caesarean section may be performed to rescue the fetus.

Key points

Maternal Resuscitation

- Fetal survival is improved by optimizing maternal resuscitation and avoidance of hypovolaemia. Haemorrhage control may be impossible without emergent surgical intervention.

Fluid resuscitation

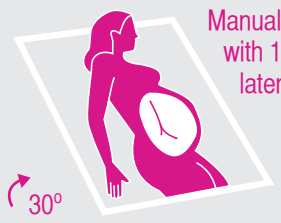
- Initiate if hypovolaemia is suspected to maintain both maternal and fetoplacental perfusion. Note that a pregnant patient may not display signs of haemorrhage until as much as 30% of her blood volume is lost.
- *Crystalloid fluids:* Initial treatment with Normal Saline is recommended up to 20 - 30 mL/kg.
- *Blood products:* if minimal response to fluids, administration of Rhesus negative packed red blood cells should be given.

Maternal oxygenation

- Maternal hypoxia is associated with poor fetal outcomes. Maintain oxygenation >94%. Apply supplemental oxygen as required.

Patient positioning

- Patients greater than 20 weeks gestation should be deliberately positioned to protect blood flow and venous return. This can be achieved by using 1 or 2 handed manual left uterine displacement or with a left sided tilt of 15 - 30° to facilitate blood flow and venous return.



Manual displacement with 1 or 2 hands or left lateral tit 15 - 30°

Obstetric Trauma Considerations

Pregnancy Related Complications

- Placental abruption.
- Premature labour.
- Uterine rupture.
- Feto-maternal haemorrhage.

Obstetric assessment is important to identify signs of labour, fetal well-being, perineal injury and concealed or contained haemorrhage.

Cervical examination should only be performed by qualified obstetric staff.

Fetal well-being: CTG monitoring is important to institute where possible to assess fetal status. If not available, auscultate fetal heart sounds and / or ask the mother when she last felt fetal movement.

ARV Adult Retrieval Victoria 1300 36 86 61

PIPER Paediatric Infant Perinatal Emergency Retrieval 1300 13 76 50

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