LONDON'S AIR AMBULANCE
roadside intensive care

Pre-hospital Care Standard Operating Procedure

Management of the Pregnant Trauma Patient

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APPROVAL/ ADOPTED:	PHC Policy Board	
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Aims:

- To describe how management of a pregnant trauma patient is different and to emphasize the legal situation
- Describe the situations when an emergency C-section is appropriate/necessary
- Describe a standard method for C-section
- What to do with the delivered baby

Background:

Maternal Physiology:

- The mother will have an increased cardiac output (up to 40%). PR can be 10-15 beats/minute faster
- They have an increased TV but not usually RR.
- They have an increased circulatory volume (up to 30% of normal)
- These features can mean a lot of volume can be lost before it's manifest clinically.
- Intubation will be difficult: increased chance laryngeal oedema, breast may obstruct laryngoscope, increased risk of aspiration.

Key points:

- Foetus does well if mother does well
- Maternal survival is paramount – the foetus has NO legal standing
- Aim to optimise conditions for both mother and foetus but mother comes first.

Policy:

Patient Management:

As with all trauma patients, plus:
If over 20/40, manage in left lateral position, using a wedge or pillow to maintain position. This will optimise venous return and help maintain maternal BP.

Caesarean Section:

Consider if:

- ***Patient severely unstable and hypotensive +/- agonal respiration***: In this situation pt should be managed as normal SOP's, and after normal interventions have been performed, consider C-section if parameters have not stabilised. By removing the foetus, you improve diaphragmatic movement, you reduce IVC compression, you cause the uterus to contract thus helping maternal BP. The foetus is still a secondary consideration.

- ***Patient has arrested in front of you or within last 5 minutes***: C-section should be performed within 5 minutes of cardiac arrest in all patients. After this time it is of no benefit. Again it is performed to try and save maternal life and the foetus is of secondary consideration. If there are enough personnel the foetus can be handed to another paramedic/doctor, but your attention is to the mother until such time as it is appropriate to PLE. At least one cycle of CPR should be performed after C-section before PLE.

Caesarean Section: the procedure

- CPR should be ongoing if the patient has arrested, while the C-section is performed

- Equipment needed: scalpel

    - Horizontal incision 2-3cm above symphysis pubis; 20cm length incision
    - Cut through skin, then fat and the rectus sheath. All layers should give easily as incised.
    - Use hands to pull peritoneum open
    - Now cut in same direction through uterine wall and widen hole with hands
    - Insert one hand under presenting part of foetus
    - Pull foetus out of cavity, clamp cord and cut.
    - Hand foetus to colleague or leave to one side if no spare people.
    - Remove placenta.
    - This will take less than 2 minutes
    - Put pressure on any bleeding and reassess patient.
    - Only turn your attention to foetus once everything has been done for mother that can be done.
    - LAS crew and/or HEMS paramedic can begin resuscitation of foetus.

Management of delivered foetus:

Initially this should be by LAS crew/ HEMS paramedic while you are addressing mother's needs.

Once mother stable or PLE'd you can address the foetus.

- Rub baby vigorously with warm blanket
- Suction any secretions from airway which may stimulate breathing
- Provide high flow oxygen
- If no respiratory effort, give 5 breaths with BVM, confirming that chest moving. Use adjuncts if necessary.
- Repeat a further 2 times if foetus not making own effort
- If still no respiratory effort and pulse absent or less than 60, start chest compressions
- IO access or umbilical cord access should be attempted.
- Definitive airway should be secured
- Decision about continuing CPR will need to take into account age of foetus, any response to your interventions, and length of time that C-section took