

Statement on Perimortem Caesarean Section from MOET

Some uncertainty exists regarding the purpose, timing, gestation, incision and title of the perimortem caesarean section, as well as where it should be performed and by whom. Given the rarity of cardiopulmonary resuscitation (CPR) on pregnant women, recommendations are based on observational data and expert opinion rather than randomised trials.

Maternal wellbeing is paramount. The perimortem caesarean section is an important part of maternal resuscitation. Perimortem caesarean is recommended in an apparently lifeless pregnant woman, in whom effective CPR, with lateral uterine displacement, has not successfully restored spontaneous maternal circulation within four minutes.

The perimortem caesarean should be commenced at four minutes, so that delivery of the fetus is achieved within five minutes. The timing is proposed on the basis of the consideration that after five minutes of anoxia to the mother permanent cerebral damage is likely to occur.

Maternal haemodynamic changes are significant, and occur early in pregnancy. Similarly, the maternal auto-transfusion associated with the reversal of these changes occurs very rapidly after birth. It has been observed that evacuation of the uterus can result in restoration of maternal circulation during CPR, due to this auto-transfusion, as well as the complete relief of aorto-caval compression, effected by evacuating the gravid uterus.

The best way to save the fetus is effective resuscitation of the mother. Perimortem caesarean should be considered when the uterine fundus is palpable at or above the level of the umbilicus i.e. from approx. 20 weeks gestation.

Perimortem caesarean is also referred to as resuscitative hysterotomy. Some groups now prefer the latter term, which does help direct focus on the purpose of the procedure as part of maternal resuscitation. The term hysterotomy, however, implies that the procedure is done prior to viability, whereas the fetus may well be of a viable gestation, so provision should still be made for neonatal resuscitation, if required.

The preferred incision is a midline incision, especially in the context of abdominal trauma. A transverse incision is acceptable, however, if it is the only one with which the operator feels familiar, especially in the non-trauma setting.

It may well be that no obstetrician is available within the four to five minutes. A perimortem caesarean can be performed by a professional with sufficient skills and understanding of the principles. Any such professional should be encouraged to proceed, as emptying the uterus may be the critical step in achieving maternal survival, and continuing CPR will otherwise be unlikely to succeed. For that reason it may be beneficial for emergency department physicians to attend caesarean lists. Any professional who is not adequately trained or experienced cannot, however, be criticised for not attempting the procedure.

The caesarean section should be performed at the site of CPR, without transferring to an operating theatre environment, whether it be within the emergency department, on the ward, or in the outpatient department, etc.

The only equipment required is a scalpel and a ligature or clamp for the umbilical cord. Transfer to theatre and sterile scrub can take place if and when the resuscitation is effective. If maternal circulation is restored then resumption of caesarean bleeding should be anticipated and temporary packing may help with haemostasis.