DELAYED CORD CLAMPING (DCC) ● 1/2

INTRODUCTION

There is a body of evidence which indicates that a delay in umbilical cord clamping of 60 seconds or more, depending on the level at which the baby is held relative to the placenta, leads to significant benefits for the newborn baby. These benefits are greatest for premature babies

Current evidence suggests DCC is safe and can confer benefits to term and preterm babies

- supporting transition to extra-uterine life
- associated with improved neonatal outcomes and reduced mortality
- ILCOR, RCOG, NICE, Resuscitation Council (UK) and WHO all recommend DCC for ≥60 seconds in stable babies, but state that resuscitation should take priority in unstable babies

The 60 second period of placental transfusion starts when the buttocks are delivered for a cephalic presentation or the head for a breech presentation

INDICATIONS

- Beneficial for all babies (especially preterm)
- When immediate resuscitation required, resuscitation with intact cord can be performed (if appropriate equipment available)

CONTRAINDICATIONS

- Monochorionic twins
- Conditions where placental circulation is not intact, e.g.:
  - placental abruption
  - bleeding placenta praevia
  - bleeding vasa praevia
  - cord avulsion
- Antenatally diagnosed congenital abnormalities that may require medical intervention immediately after birth e.g.:
  - congenital diaphragmatic hernia
  - gastroschisis
  - CCAM with thoraco-amniotic shunt
- Babies at high risk of a blood-based infection (e.g. newly diagnosed HIV or hepatitis)
  - most mothers who have low viral loads can safely have DCC
- Acute maternal obstetric emergency
- Baby requires immediate resuscitation

EQUIPMENT

- Neopuff™
- Single patient use face mask
- Suction
- Plastic bag
- Thermometer/temperature monitoring equipment
- If available, use of platforms, e.g. LifeStart™ or Concord® trolley allow for assisted transition and stabilisation of babies whilst allowing for DCC

PROCEDURE

Pre-delivery

- Discuss benefits and risks of DCC with parents in antenatal appointments and before delivery
- Provide parents with:
  - opportunity to ask questions
  - parental information leaflet
- Parents have a choice to decline DCC − decision should be respected and supported by the team

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- Discuss plan for DCC with intact cord stabilisation with midwife/obstetrician before delivery

During delivery

- Babies born to parents who have consented to DCC to receive ≥60 seconds of DCC, unless clinically contraindicated

For babies assessed and appear stable:

- Following delivery, dry and wrap baby, or if <32 weeks' gestation and hat applied place immediately into plastic bag
- **Vaginal birth:** hold baby below level of perineum, or if appropriate, place baby skin-to-skin with mother following drying and stimulation
- use pre-warmed towels from resuscitaire to keep baby warm
- **Caesarean section delivery:** hold baby below level of incision site
- prevent heat loss, e.g. place sterile towel over baby, whilst allowing for drying and stimulation
- Where facilities (e.g. LifeStart™ or Concord® trolley) available, assisted transition and assessment may be commenced while undergoing DCC
- commence stabilisation as per NLS guidelines
- It is best if the baby takes his first breath and expands his lungs (drawing blood from the placenta) before the cord is cut.
- If deemed more appropriate by obstetric/neonatal team (i.e. in situations where cord is very short) and baby seen to be vigorous − appropriate practice to perform DCC without equipment
- may not allow assessment of heart rate, tone etc. by neonatal team during initial minute
- Babies born within intact amniotic sac:
- placental circulation is interrupted
- may be appropriate to delay cord clamping until cord pulsations stop or up to 1 min if baby is vigorous
- deliver baby into cot
- rupture sac
- if preterm, place baby in plastic bag and transfer to resuscitaire
- if cord pulsations stopped, clamp cord

For babies in need of resuscitation:

- If baby requires intubation/chest compressions, ask for umbilical cord to be cut immediately and commence NLS stabilisation
- Babies ≥28 weeks', if DCC not possible, umbilical cord milking recommended
    - This is a process in which, the baby is held 10 -15 inches (25 to 40 cm) below the level of the introitus or incision. A 20cm section of the cord is milked (stripped) by the midwife/obstetrician using a gloved hand in the direction of the baby. The milking speed should be approximately 10cm per second. The cord should be milked 2 or 3 times and then clamped and cut

Milking of the cord contraindicated and associated with increased incidence of severe IVH in preterm babies <28 weeks' gestation

AFTERCARE

- Record timing of cord clamping in medical notes
- Note on cord blood gas analysis - For medico legal purposes it is important to document the time at which the cord was clamped as delayed clamping reduces pH and increases base deficit values in umbilical artery blood samples. The changes at thirty to sixty seconds after birth are small. There is no data for changes in umbilical cord gas values, in unclamped cords, beyond sixty seconds of age.
- Note on the administration of uterotonics The timing of administration of uterotonics has varied from study to study. Some investigators gave them with delivery of the anterior shoulder others only after the cord was clamped, even in the delayed clamping group.

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Current WAHT practice is to give a uterotonic to the mother, by IM injection, with delivery of the baby – if cephalic it is given with delivery of the anterior shoulder.

COMPLICATIONS

- Jaundice requiring phototherapy
- Hypothermia