BABIES BORN AT MARGINS OF VIABILITY ● 1/2

INTRODUCTION

- Outcomes for premature babies at borderline viability improve with each additional week of gestational age. See EPICure studies http://www.epicure.ac.uk/
- Ultrasound estimated fetal weight within a week before delivery of <500 g at any gestation between 22^{+0} and 25^{+6} weeks is associated with a very poor outcome; see Draper charts http://pediatrics.aappublications.org/content/pediatrics/131/2/e425/F1.large.jpg.
- Ultrasound carried out in first trimester of pregnancy is the most reliable method of estimating gestational age
- If fetal heart heard during labour, call neonatal team to attend delivery, unless decision not to intervene and rationale already agreed with parents and documented
  - once baby delivered, further resuscitation and management decisions should be made in baby's best interests, taking into account clinical condition at birth, e.g. heart rate, breathing, weight, severity of bruising to skin etc.; obtain urgent senior advice
- Discussion with parents before birth, if possible, should precede any action, preferably by obstetric and paediatric teams jointly
- Document all discussions in case records

MANAGEMENT

- An experienced neonatologist ideally to be present at delivery of extremely premature babies (<27 completed weeks' gestation) and make confirmatory assessment of gestational age and condition of baby

≥24 weeks' gestation

- Unless baby has a severe abnormality incompatible with any significant period of survival, initiate intensive care and admit to NICU

<24 weeks' gestation

- Discuss with parents national and local statistical evidence for survival in babies with range of disabilities found in this age group
  - explain that statistics indicate most babies born <24 weeks' gestation are likely to die and a significant proportion of survivors are likely to have some form of neurological impairment

MANAGEMENT AT SPECIFIC GESTATIONS

24^{+0}–24^{+6} weeks' gestation

- Be prepared to provide full, invasive, intensive care and support from birth and admit to NICU, unless parents and clinicians agree that in view of baby's condition (or likely condition), or response to initial resuscitation, intensive care is not in his/her best interests

23^{+0}–23^{+6} weeks' gestation

- Give consideration to parents' wishes regarding resuscitation and invasive intensive care treatment. However, when condition at birth indicates that baby will not survive for long, clinicians are not legally obliged to proceed with treatment that is wholly contrary to their clinical judgement, if they consider treatment would be futile
  - as a first step, determine whether baby is suffering, whether any suffering can be alleviated, and likely burden placed on baby by intensive care treatment
  - where parents would prefer clinical team to make decision about initiation of intensive care, clinicians must determine what constitutes appropriate care
  - where it has not been possible to discuss a baby's treatment with mother and, where appropriate, her partner, before the birth, clinical team should consider offering full invasive intensive care until baby's condition and treatment can be discussed with parents
- If baby is born in good condition, initiate resuscitation using IPPV (via ETT or face mask if good chest movement obtained)
  - if baby does not improve and heart rate remains low at 10 min after effective ventilatory support, withhold further resuscitation
  - response of heart rate to ventilation is critical in deciding whether to continue or stop. Counsel parents with sensitivity that further interventions are futile

22^{+0}–22^{+6} weeks' gestation

- Standard practice should be not to resuscitate a baby and this would normally **not** be considered or proposed

BABIES BORN AT MARGINS OF VIABILITY ● 2/2

- If parents request resuscitation, and reiterate this request, discuss risks and long-term outcomes with an experienced neonatologist before attempting resuscitation and offering intensive care
- Treating clinicians must all agree that this is an exceptional case where resuscitation is in baby's best interests

<22 weeks' gestation

- Resuscitation should not occur in routine clinical practice
- any attempt to resuscitate babies born at this gestational age should take place only within the context of an approved research study

When intensive care not given, clinical team must provide palliative care until baby dies. Refer to BAPM guidelines for counselling

PARENT INFORMATION

- 'Information for parents of extremely premature babies' leaflet available to download from www.epicure.ac.uk/index.php/download_file/view/150/