Discontinuation of neonatal resuscitation in term babies

Dr Richmond highlighted the importance of discontinuing appropriate resuscitation at 10 min in the absence of signs of life. This is justified due to the poor prognosis (both for survival and neurodevelopmental outcome). In a difficult situation, one in which there seem to be no guidelines, is that of the baby who shows no signs of life other than return of cardiac output. If a baby remains completely flaccid and has no breathing movements at 20 min despite restoration of cardiac output before 10 min, the neurodevelopmental outcome is likely to be similarly grim. In this situation, some practitioners will give 100% oxygen without ventilation for a period of time to ensure an adequate pCO₂ for respiratory drive while maintaining oxygenation. Others will remove the baby to a special care baby unit and place them on a ventilator for further assessment. In any case, breathing and some movements may appear after some hours, by which time the Rubicon has been crossed. Justification of such an approach is given in some texts on resuscitation. Discontinuation of appropriate resuscitation at 10 min in the absence of signs of life is justifiable due to the poor prognosis (both for survival and neurodevelopmental outcome) in a difficult situation, on which there seem to be no guidelines, is that of the baby who shows no signs of life other than return of cardiac output. If a baby remains completely flaccid and has no breathing movements at 20 min despite restoration of cardiac output before 10 min, the neurodevelopmental outcome is likely to be similarly grim. In this situation, some practitioners will give 100% oxygen without ventilation for a period of time to ensure an adequate pCO₂ for respiratory drive while maintaining oxygenation. Others will remove the baby to a special care baby unit and place them on a ventilator for further assessment. In any case, breathing and some movements may appear after some hours, by which time the Rubicon has been crossed. Justification of such an approach is given in some texts on the basis of a few extremely rare syndromes (which may have their own poor prognosis). However, a cord/umbilical gas analysis and the history from the obstetric staff will helpfully reiterate current advice that discontinuation of appropriate resuscitation at 10 min in the absence of signs of life is justifiable due to the poor prognosis (both for survival and neurodevelopmental outcome). In a difficult situation, one in which there seem to be no guidelines, is that of the baby who shows no signs of life other than return of cardiac output. If a baby remains completely flaccid and has no breathing movements at 20 min despite restoration of cardiac output before 10 min, the neurodevelopmental outcome is likely to be similarly grim. In this situation, some practitioners will give 100% oxygen without ventilation for a period of time to ensure an adequate pCO₂ for respiratory drive while maintaining oxygenation. Others will remove the baby to a special care baby unit and place them on a ventilator for further assessment. In any case, breathing and some movements may appear after some hours, by which time the Rubicon has been crossed. Justification of such an approach is given in some texts on the basis of a few extremely rare syndromes (which may have their own poor prognosis). However, a cord/umbilical gas analysis and the history from the obstetric staff will

provide helpful evidence in most cases. Most paediatricians have the wisdom to weigh the probability of doing harm against a remote possibility of good and advise parents accordingly but, in these days of increasing paranoia, the support of a guideline could be helpful.

REFERENCE


Corrections

doi:10.1136/adc.2007.118117corr1

P J McNamara and A Sehgal. Towards rational management of the patent ductus arteriosus: the need for disease staging (Arch Dis Child Fetal Neonatal Ed 2007;92:F424–F427). In class E5 of table 1 IVRT should be IVRT of class E4 should read &lt;40 (not &gt;60).

doi:10.1136/adc.2005.092478corr1

C Booth, M H Premkumar, A Yannoulis, et al. Sustainable use of continuous positive airway pressure in extremely preterm infants during the first week after delivery (Arch Dis Child Fetal Neonatal Ed 2006;91:F398–F402). In table 3 of this article CMV is incorrectly defined as cytomegalovirus; the correct definition is continuous mandatory ventilation.

doi:10.1136/adc.2007.118117corr1

N K Sujay, N J Shaw

Liverpool Women’s Hospital, Liverpool, UK

Correspondence to: N J Shaw, Liverpool Women’s Hospital, Crown Street, Liverpool L8 7SS, UK; ben.shaw@lwh.nhs.uk

Competing interests: None.

Accepted 17 May 2007

doi:10.1136/adc.2007.122267

In summary, using the equipment competency checklists and evaluating their use has helped us to clarify what SHOs specifically need to know to be competent at using a particular item of equipment. We feel that the equipment competency lists when used as part of educational supervision may improve competency and may facilitate targeted training to improve any deficiencies that have been identified.

PostScript

driver and resuscitaire. However, when tested, the SHOs failed 26/80 (33%) competency items for the ventilator, 7/64 (11%) items for the flow driver and 19/120 (16%) items for the resuscitaire. Only five SHOs used the controls on the monitoring system in routine practice and they failed 44/80 (55%) items on testing. One reason for a high number failing on testing may be that some competencies on the lists related to tasks which are not routinely carried out by medical staff (eg, setting alarm limits on the ventilators). Another is that some functions of an item of equipment may be rarely used by SHOs (eg, patient triggered ventilation). Therefore, it is important that competency sheets should reflect only what would be expected of SHOs when using the items of equipment and to emphasise to them that they should not attempt to use any of the items of equipment in any other way beyond the level of their expected competency. In the case of the monitoring system controls it seems that some SHOs had already made the decision not to carry out some tasks. Of greatest concern in this evaluation was that many SHOs were not fully competent at using the resuscitaire (despite all having attended a neonatal life support course). The SHOs highlighted several other items of equipment, which they thought could have a competency list (eg, the cold-light source and the practicalities of taking blood from an arterial line).

In summary, using the equipment competency checklists and evaluating their use has helped us to clarify what SHOs specifically need to know to be competent at using a particular item of equipment. We feel that the equipment competency lists when used as part of educational supervision may improve competency and may facilitate targeted training to improve any deficiencies that have been identified.

REFERENCES


Corrections

doi:10.1136/adc.2007.118117corr1

P J McNamara and A Sehgal. Towards rational management of the patent ductus arteriosus: the need for disease staging (Arch Dis Child Fetal Neonatal Ed 2007;92:F424–F427). In class E5 of table 1 IVRT should be IVRT of class E4 should read &lt;40 (not &gt;60).

doi:10.1136/adc.2005.092478corr1

C Booth, M H Premkumar, A Yannoulis, et al. Sustainable use of continuous positive airway pressure in extremely preterm infants during the first week after delivery (Arch Dis Child Fetal Neonatal Ed 2006;91:F398–F402). In table 3 of this article CMV is incorrectly defined as cytomegalovirus; the correct definition is continuous mandatory ventilation.