

Consensus statement on management at borderline of viability

This joint Maternity and Northern Neonatal Network document aims to address the management of women with threatened labour at 23 weeks gestation.

For extremely preterm babies of 24 weeks upwards there is good consensus about giving antenatal steroids and attempting to ensure delivery in a centre capable of level 3 neonatal intensive care. This guidance relates to the management of pregnant women before 24 weeks either going into preterm labour or needing delivery for maternal reasons.

The results from the EPICure2 data suggests there is an increase in the survival and disability free survival in the extreme premature infants born before 26 completed weeks of gestation especially in the 24 and 25 weeks gestation. The observed benefits stem from better antenatal care provided such as use of steroids, use of surfactant and improved postnatal management. Increasingly the survival at 23 weeks has improved in recent years in some centres however the use of antenatal steroids is varied. Over the 6 years 2006-11, aggregate survival to 1 year for babies at 23 weeks gestation was around 40% in the Northern Neonatal Network.

There is increasing evidence of benefit in use of antenatal steroids below 24 weeks. In a large prospective cohort study¹ (1993-2009) (N=10541), by the NICHD network published data on the benefits of corticosteroid therapy death or neurodevelopmental impairment in surviving infants born at 23 weeks gestation was significantly lower at 18 to 22 months infants when at least one dose of antenatal steroid therapy was administered [83.4% vs. 90.5%; AOR 0.58 (95% CI 0.42-0.80)].

In a separate retrospective cohort study (N=181), Hayes et al² showed 82% reduction in the odds of death when complete antenatal steroid therapy was administered at 23 weeks of gestation. The multivariable analysis showed decreased odds of death (OR 0.18, 95% CI 0.06-0.54) with no significant differences in the occurrence of NEC or IVH among survivors. In another retrospective study, Abbasi et al³ showed exposure to single course of corticosteroids prior to 24 weeks gestation was associated with reduction in risk of severe IVH and neonatal mortality.

In the light of the current evidence, it is important to have uniformity of approach across the maternity and neonatal networks.

After discussion at the maternity and neonatal network meetings it was agreed

- 1) To consider antenatal steroids from 23+0 weeks gestation
- 2) To consider transfer to the woman to a tertiary centre from 23+0 weeks gestation
- 3) To discuss the above with the obstetric and neonatal team at the tertiary centre

The parents' wishes and previous obstetric history play an important role and therefore it is important that a detailed antenatal discussion takes place with the family.

Sundeep Harigopal (Northern Neonatal Network Clinical Lead), November 2014

¹ Carlo et al. Association of Antenatal Corticosteroids with Mortality and Neurodevelopmental Outcomes among Infants Born at 22 to 25 Weeks' Gestation. *JAMA*. 2011;306(21):2348-2358

² Hayes EJ, Paul DA, Stahl GE, et al. Effect of antenatal corticosteroids on survival for neonates born at 23 weeks of gestation. *Obstet Gynecol*. 2008;111(4):921-926

³ Abbasi S, Oxford C, Gerdes J, Sehdev H, Ludmir J. Antenatal corticosteroids prior to 24 weeks' gestation and neonatal outcome of extremely low birth weight infants. *Am J Perinatol*. 2010;27(1):61-66