HYPERGLYCAEMIA
Supporting information

Hyperglycaemia increases mortality risk in premature infants?

A prospective chart study of 93 extremely low birth-weight infants (Hays, 2006) found that more than 50% of the infants had persistent blood glucose concentrations of >150 mg/dL during the first week of life. Twenty-two of these infants (44%) had an early adverse outcome, defined as death or intra-ventricular haemorrhage of grade 3 or 4 before the 10^{th} day of life.
Another prospective study in 252 premature infants weighing </=1500 g (Heimann, 2007) found a significant increase in mortality ($p<0.0001$) with increasing median blood glucose level and repeated (>/=4) incidents of blood glucose levels >/=150 mg/dL associated with low gestational age (<27 weeks).
Retrospective analysis of a prospective cohort study of 201 ELBW infants (Kao, 2006) found the odds ratio for either dying or developing a late infection was 5.07 (95% CI 1.06 – 24.3) in those babies with persistent severe hyperglycaemia (>/=180 mg/dL).

Hays SP, O'Brian Smith E, Sunehag AL. Hyperglycemia is a risk factor for early death and morbidity in extremely low birth-weight infants. Pediatrics 2006;118:1811-18

Heimann K, Peschgens T, Kwiecien R, et al. Are recurrent hyperglycemic episodes and median blood glucose level a prognostic factor for increased morbidity and mortality in premature infants </=1500 g? J Perinat Med 2007;35:245-8

Kao LS, Morris BH, Lally KP, et al. Hyperglycemia and morbidity and mortality in extremely low birth weight infants. J Perinatol 2006;26:730-6

Evidence Level: IV

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