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NECROTISING ENTEROCOLITIS - A 15 YEAR OUTCOME REPORT FROM A SPECIALIST CENTRE

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Aim of the Study: Necrotising Enterocolitis (NEC) is a challenging disease in newborns associated with high mortality and morbidity. Low birthweight and prematurity are well recognised risk factors. "Term NEC" in mature infants is also described though a rare association. In this study we report outcomes of all babies having emergent laparotomy for NEC at our institution (utilising co-location to neighbouring NICU's post-operatively) to examine - impact of gestational age on (1) mortality and (2) timing of operation and its relationship(s) to survival.

Methods: Medical case records of babies with ICD code(s) - NEC / Necrotising enterocolitis were examined for the era(s) 2000 - 2015. After excluding ‘non-operative' NEC patients - 254 cases were identified having emergency surgery for advanced Bells stage NEC (confirmed on histology). Effect of (a) timing of surgery and (b) mortality within 30 days (30D) were statistically analysed using Pearsons correlation coefficient (P< 0.05 significant).

Results: Mean gestational patient age was 28.46 weeks (CI 95% 27.95 to 28.98). Overall 30D mortality for the operative cohort was 18.5%. 30D mortality according to the WHO Gestational Age Classification was : (i) < 28 weeks - 29% , (ii) 28 - < 32weeks - 7% , (iii) 32 - < 37weeks - 10% , (iv) > 37weeks - 0% , showing a correlation with birthweight. Term newborns > 37 weeks - comprised 8 % of all patients. Babies born near term had operation at a significantly shorter time interval after delivery vs those born prematurely (Pearson correlation co-efficient of -0.117 ; p=0.005).

Conclusion: Excellent survival with early operation (> 70%) is feasible in extremely (< 28 weeks) premature infant(s) with NEC. With increasing gestational age (> 32 weeks) mortality is now uncommon. Aggressive resuscitation and timely emergency operation has contributed to the improving outcomes for NEC at this centre.