

INTESTINAL STRICTURE RATE FOLLOWING NECROTIZING ENTEROCOLITIS - RESULTS OF A SINGLE CENTRE

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Aims: Necrotizing Enterocolitis (NEC) continues to be responsible for significant morbidity and mortality in the preterm infant. Post-NEC stricture formation has been reported in the literature to occur in 30-50% of preterm infants^{1,2}. Factors such as surgical treatment and severity of NEC are thought to contribute to stricture formation. We undertook a study to assess the current complication rates for infants with proven NEC.

Methods: We undertook an ethically approved retrospective review of all infants admitted to a surgical NICU between Jan 2011 and June 2015, with a proven diagnosis of NEC (modified Bell's Stage \geq II). Patients were identified using the Badgernet neonatal database. Data collected included gestational age, birth weight, surgical intervention, mortality and incidence of post-NEC strictures. Strictures were identified either by contrast study or on table at laparotomy. Data were analysed using Chi squared or Student T test.

Results: 143 infants with a diagnosis of proven NEC were managed over a four year period, of whom 96 required surgical management (67%). The overall mortality was 18% with a post NEC stricture rate of 13%. In the surgically managed group, mortality was 22% (21/96) with a stricture rate of 18% (17/96). Data were further analysed by gestational age (Table 1). There was a statistically significant difference in mortality by gestational age $p = 0.01$, but no difference in need for surgery or stricture formation. Surrogate markers of disease severity (inotrope use or coagulopathy) were not associated with stricture formation.

Conclusion: This study is one of the largest contemporary single centre datasets for NEC. We have found a substantially lower incidence of post-NEC stricture compared to previous published studies. This may reflect a general trend for improved outcomes for babies requiring neonatal intensive care.

1. Gaudin 2013 Plos One

2. Shimpl 1994 Acta Paediatrica

Gestational age	Birth weight g (mean {SD})	Surgical intervention	Mortality	Post NEC Stricture
<28 weeks	740 {183}	64/91 (70%)	21/91 (23%)	8/91 (9%)
28-32 weeks	1275 {681}	20/32 (62%)	1/32 (3%)	8/32 (25%)
<37 weeks	2062{315}	4/7 (57%)	3/7 (40%)	0/7
Term	2573 {575}	8/12 (66%)	1/12 (8%)	1/12 (8%)