

Necrotizing enterocolitis in children with and without congenital heart defects

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Necrotizing enterocolitis (NEC) is a disease commonly found in preterm infants. Risk factors that contribute to the disease include asphyxia, apnea, hypotension, sepsis, and congenital heart diseases. Pneumoperitoneum is a well-accepted indication for surgery and in severe case peritoneal drainage.

Aim: To evaluate the survival of neonates with NEC and NEC with heart diseases (NEC+CHD) who underwent peritoneal drainage.

Patients and Methods: A retrospective study of 17 years (2000-17) involving 270 neonates with NEC (n=120) and NEC+CHD (n=150) subdivided in patent ductus arteriosus (PDA) and severe heart diseases. For the estimation of the relative risks (RR) and their 95% confidence intervals, simple log-binomial regression models (crude RR) and multiples (adjusted RR) were adjusted using weight, gestational age, Apgar 5th min, rupture of amniotic membrane and use of corticoids as covariates.

Results: There was a statistically significant difference between the crude RR [NEC / NEC+CHD] (95% CI) = 4.31 (2.86, 6.48) and adjusted RR [NEC / NEC+CHD] (95% CI) = 1.44 (1, 08, 1.94)(Fig); (RR 95%) = 0.54 (0.29; 0.99) and RR adjusted [severe] (95% CI) = 0.45 (0), and the presence of drainage (11/120 NEC and 19/150 NEC+CHD) crude RR [NEC / NEC+CHD] (95% CI) = 4.31 (2.86, 6.48) and adjusted RR [NEC / NEC+CHD] (95% CI) = 1.44 (1.08, 1.94).

Conclusion: NEC+CHD had greater number of survival when drained. Chronic hypoxemia of them before having pneumoperitoneum may explain this difference and may serve as a guideline for survival in indicating drainage.

	N	DRAINAGE	SURVIVAL OF DRAINAGE	TOTAL	
NEC	109 (90%)	11 (10%)	1 (10%)	120	ref
NEC +CHD	131 (88%)	19 (12%)	7 (37%)	150	<i>p<0.01</i>
PDA	26 (80%)	7 (20%)	2 (29%)	33	
SHD	105 (90%)	12 (10%)	5 (42%)	117	