

Transfusion Associate Necrotizing Enterocolitis at Taiwan

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Background: Despite significant amounts of research, necrotizing enterocolitis (NEC) is still one of the most catastrophic acquired intestinal disease and surgical emergencies in preterm very low-birth weight infants (PVLBW). Recently, researchers have found that some of NEC occurrence within 48 hours of transfusion (TANEC). To investigate clinical pictures as incidence, risk factors, complication of TANEC at Taiwan.

Methods: A retrospective cohort design was conducted. The study population was infants with a birth weight of <1500 g from four level III neonatal intensive care unit during 5 years period. TANEC was defined as NEC Stage II that occurred within 48 hours after initiation of PRBC transfusion. Statistical analysis included unadjusted and multivariable analyses.

Results: The study sample included 1511 infants. A total of 122 infants (5.5%) developed NEC, and 33 (17%) of 122 NEC cases occurred after transfusion. Infants who received a transfusion had increased adjusted odds (odds ratio: 1.2 [95% confidence interval: 1.1-4.0]) of developing NEC compared with infants who did not receive a transfusion. TANEC were predominantly (80%) from male donors, more immature 26.7 gestational age, were at a median of 8.2 days old and at a median of 29.6 weeks postconceptual age. There was no difference on the surgical intervention, mortality between TANEC and Non TANEC.

Conclusions: In our study sample, PRBC transfusion was associated with mild increased odds of NEC. The rate of NEC after transfusion was 1.2%. From our data we could not determine if PRBC transfusions were part of the causal pathway for NEC or were indicative of other factors that may be causal for NEC.