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HAS OUR MANAGEMENT OF NECROTIZING ENTEROCOLITIS IMPROVED OVER THE LAST 25 YEARS?

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Background:

Necrotizing enterocolitis (NEC) is an inflammatory disease of the gastrointestinal system affecting preterm neonates.

Objective:

The objective of our study was to determine how the incidence, mortality and outcomes, mean length of stay and mean days to full enteral feeds, has changed over 25 years at the Health Sciences Centre (HSC).

Methods:

This study was a retrospective chart review of all neonates treated for NEC at HSC from 1992 to 2016. The incidence of NEC over time was measured using log linear regression with quasi-Poisson parameters. Mortality due to NEC over time was measured using logistic regression. Mean length of hospital stay and mean time to full enteral feeds of NEC cases were measured using linear regression.

Results:

There were 343 NEC cases reviewed. The change per year for the incidence of NEC was 0.98 ($p = 0.17$, 95%CI 0.95-1.01), and the change per year for the mortality of NEC was 1.02 ($p = 0.31$, 95%CI 0.98-1.06). The mean length of hospital stay changed 0.10 days/year ($p = 0.82$), and the time to full enteral feeds changed 0.16 days/year ($p = 0.42$).

Conclusion:

From 1992 to 2016, there has not been a significant change in the incidence, mortality, mean length of hospital stay and mean time to full enteral feeds for babies with NEC. Our next step will be to explore why outcomes have remained unchanged: we may be failing to recognize opportunities to improve management, or we may be managing sicker patients with equivalent outcomes.