

Pneumothorax Prevalence and Mortality per Gestational Age in the Newborn

Ceyda Acun¹, Leen Nusairat¹, Amer Kadri², Aseel Nusairat¹, Natalie Yeaney¹, JALAL ABU-SHAWEESH¹, and Hany Aly¹

¹Cleveland Clinic Children's Hospital

²Cleveland Clinic Foundation

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Abstract

Objectives: Pneumothorax (PTX) in newborns is a life-threatening condition associated with high morbidity and mortality especially in premature infants. The frequency of PTX in neonates at different gestational ages (GA) and its impact on neonatal mortality have not been quantified. We aimed to determine: 1) the prevalence of PTX in neonates at different GA from [?]24 weeks to [?]37 weeks, 2) the impact of PTX on mortality per GA, and 3) the impact of PTX on the length of stay (LOS) per GA. **Methods:** The national Kids' Inpatient Database (KID) for the years of 2006 to 2012 were used. We included all infants admitted to the hospital with a documented GA and ICD9 code of pneumothorax. Bivariate and multivariate analyses were conducted and odds ratios (OR) were calculated. **Results:** A total of 10 625 036 infants were included; of them 3665 infants (0.034 %) had a diagnosis of PTX, with highest prevalence at [?]24 weeks GA (0.67%), and lowest at term (0.02%). The overall mortality rate of patients with PTX was 8.8%, and greater in preterm (16.3%) vs. term infants (2.7%). The association of mortality with PTX was greatest at GA of 29-32 weeks (OR = 8.55 (95% CI: 6.56-11.13)). Infants who survived until discharge had a median of 2–12 days longer length of stay depending on GA category. **Conclusions:** The prevalence of PTX peaks in infants <24 weeks, however its impact on mortality is greatest at 29-32 weeks. PTX is associated with longer length of stay in survivors.

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