

Pneumothoraces in a Neonatal Tertiary Care Unit: Case Series

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To the Editor,

I have 2 comments on the interesting paper by Ali et al.¹

First, Ali et al¹ stated that 50% of their studied neonates were on ventilators when pneumothorax (PN) occurred. This frequency is alarmingly high compared to that reported in other developing countries. Further elucidation of that issue by Ali et al¹ considering type of ventilation and risk factors contributing to ventilator-associated PN in their studied cohort was solicited. PN has been noticed to develop in 26% of neonates under ventilation. The most common type of ventilation leading to PN was found to be synchronized intermittent mandatory ventilation in 51%. Conventional ventilation and continuous positive airway pressure (CPAP) were seen in 35% and 12.3% of PN, respectively. Also, male sex, prematurity, birth weight below 2500g, cesarean section (CS), and negative history of surfactant therapy were risk factors of ventilator-associated neonatal PN.²

Second, despite the limited number of neonates in Ali et al's studied cohort,¹ they recommended better selection of mothers and waiting until 37 weeks before performing elective CS as that will influence the PN risk. I presume that that point needs further clarification. Actually, the contribution of CS timing to the evolution of PN in full term or preterm babies compared to those delivered vaginally has been recently addressed in a Norwegian study. Among the 26,664 neonates born at term (≥ 37 th gestational week), 4,546 were delivered by CS (17.0%), of whom 0.5% by elective and 0.6% by emergency CS with NP. The incidence of diagnosed NP was significantly higher after CS than after vaginal delivery (0.6% vs. 0.10%, $p < 0.001$). In addition, the need for mechanical ventilation

(MV) was significantly increased (0.41% vs. 0.19%; $p = 0.01$) but the use of CPAP was not (0.28% vs. 0.15%; $p = 0.08$). Among 2,694 neonates born preterm (< 37 th gestational week), 1,266 were delivered by CS (47.0%). The incidence of diagnosed NP was 2.05% when delivered by CS but only 0.63% when delivered vaginally ($p < 0.01$). Among the preterm infants delivered by CS, 17.7% needed CPAP compared to 6.9% when delivered vaginally ($p < 0.001$) and MV was required for 8.1% and 3.7% ($p < 0.001$), respectively. Among neonates delivered at term or moderately preterm (30-36 weeks) by CS, the incidence of NP and other respiratory problems was significantly increased.³

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