



A CASE REPORT –PRIMARY SPONTANEOUS BILATERAL PNEUMOTHORAX IN A NEONATE

Pediatrics

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ABSTRACT

Pneumothorax ,through rare ,is a recognized cause of respiratory distress in immediate newborn period.it may occur spontaneously or secondary to various underlying lung diseases[1].Spontaneous pneumothorax can occur in newborn infant and if not recognized may have fatal consequences. It should be suspected in any infant in respiratory distress. It may be caused by over enthusiastic attempts at resuscitation with pressure breathing apparatus, but more often it occur spontaneously.it is due to occlusion of some of the smaller air passages by aspirated meconium.[2] In this case report ,we share our experience of a neonate came to emergency department in mild to moderate respiratory distress with bilateral spontaneous pneumothorax who recovered completely with nitrogen washout therapy,without any surgical intervention.

KEYWORDS

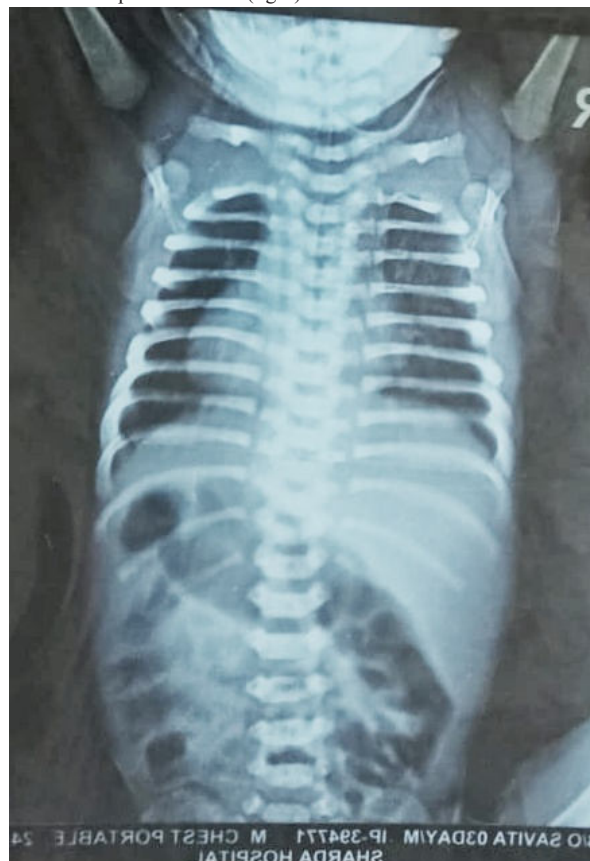
CASE REPORT-A 3200gm male Full term neonate was born by normal vaginal delivery in the remote area to primigravida mother after an normal antenatal period. There was no history of any trauma/instrumentation/meconium stained liquor. As per history child did not require any resuscitation after birth cried immediately. After 35-40min, child developed tachypnea and cyanosis of toes, supplemental o2 via face mask started then immediately child referred to our institute. Here on physical examination child was in moderate respiratory distress,HR-146/min,capillary refill time less than 3 seconds,spo2-88%,Respiratory rate-65-66/min,peripheral cyanosis and bilateral reduced breath sounds without any added sounds. Rest systemic examination finding was within normal limits. Child started on oxygen via hood 40% fio2 ,spo2 increased to 94%,cyanosis disappears. Immediately Xray chest and ABG ordered.Arterial blood gas analysis-acute respiratory acidosis without hypoxemia (ph-7.23,pco2-52,hco3-23,po2-88) and Xray chest portable showed bilateral pneumothoraces with normal cardiac silhouette (fig-1)



The oxygen flow increased to 100% fio2 via hood ,all routine labs send,orogastric tube feeding with mother milk started. Child shifted in

neonatal intensive care unit for continuous cardiac and clinical monitoring.

On day-2 followup-child clinical condition improved and only mild respiratory distress and O2 flow lowered to 60% fio2 and all the labs including sepsis screen found negative.fio2 gradually tapered and child was put off oxygen on day-4 of illness and no signs of respiratory distress. child did not require any invasive intervention(needle decompression or chest tube placement).repeat Xray chest showed resolution of pneumothorax.(fig-2)



DISCUSSION-

Pneumothorax far more frequent during the neonatal period than at any other time of life and most often first days of life.The incidence of pneumothorax is 0.5-1% in term newborns and as high as 13% in

infants weighing 501-750gm and 2% in infants weighing 1251-1500gm[3]. Soon after birth it presents with varying degree of respiratory distress. It can occur spontaneously or secondary to respiratory distress syndrome, aspiration pneumonia etc. Spontaneous pneumothorax after birth results either from rupture of alveoli secondary to positive pressure needed to expand previously uninflated lungs or from uneven distribution of inflating pressures among alveoli. Other congenital causes of spontaneous pneumothorax alpha-1 antitrypsin deficiency, cystic fibrosis to be ruled out. Administration of 100% oxygen (nitrogen washout therapy) accelerates the resolution of pneumothorax[2]. To conclude, all cases of pneumothorax in newborns do not require any invasive interventions (needle or tube thoracostomy), resolved with supplemental oxygen. Liberal use of oxygen (lower FIO_2 40-60%) should be kept in mind those who requiring treatment with oxygen more than 48 hours to prevent oxygen toxicity retrolental fibroplasia.

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