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Case Report

Angel-Wing Sign-What Goes Up Must Come Down

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Case Report

We report on a spontaneously delivered, female neonate, born in week 35+1 of gestation, weighing 2230g. It was presented pale, hypotonic, without respiratory movement and a heart rate below 100 bpm. Therapeutic treatment started with bag-mask-ventilation, followed by the installation of a pharyngeal tube and CPAP-ventilation for a total of six hours applying a PEEP of 6 millibar. The X-ray displayeda pneumomediastinum, showing elevation of both thymus lobes in the sense of an angel-wing sign (also known as spinnaker-sail sign) [1-3] (Figure 1). Ending CPAP-ventilation, treatment continued vianasal cannula without oxygen supply for one more day, resulting in a stable respiratory status. The radiographic follow-up presented a noticeable regression of the pneumomediastinum (Figures 2 & 3 = 6th day of life; part C = 13th day of life), which made invasive measures redundant.

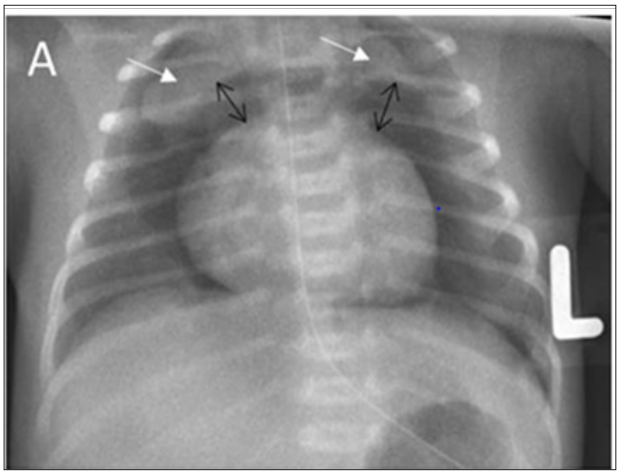

Figure 1: Part A-what goes up: Supine chest roentgenogram of the infant on the day of birth. Angel-wing sign (white arrows) shown as upward and lateral displacement of the thymus (black arrows).

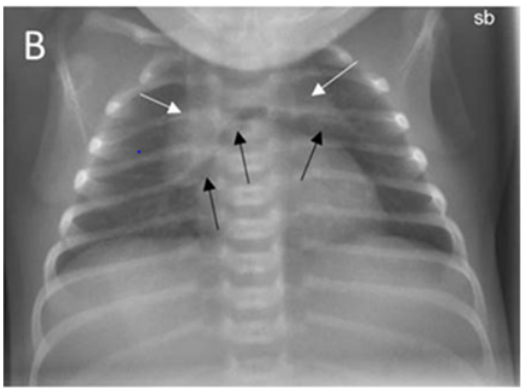

Figure 2: Parts B and C- must come down: Follow-up on day six (B) and thirteen of life (C) showing a noticeable regression of radiologic findings

Figure 3: Parts B and C - must come down: **Follow-up on day six (B) and thirteen of life (C) showing a noticeable regression of radiologic findings**

The angel-wing sign is pathognomonic for pneumomediastinum [1]. The wedged-shaped accumulation of air in the mediastinum is caused by applying positive pressure ventilation. Gas is displaced

from interstitial emphysema of the lungs, leading to an upward and lateral shift of thymic tissue [1,2]. Complications such as pneumothorax, pneumo pericardium or pneumoperitoneummay rarely occur [3]. Because of new Neonatal Resuscitation Program guidelines recommending continuous positive airway pressure (CPAP) for infants born with respiratory distress, a significant increase in CPAP use and radiographs [4] may raise the incidence of pneumomediastinum [5]. In accordance to the literature the presented case of a pneumomediastinum resolves without specific treatment and allows for conservative diagnostics and therapy [2].

Acknowledgement: Dedicated to Tom Petty (†2.10.2017)

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