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NEONATAL PYOTHORAX WITH ANTERIOR THORACIC MENINGOMYELOCELE

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ABSTRACT
Empyema, a serious complication of pneumonia, fortunately remains a less common cause of respiratory distress in neonates. Only few cases have been described in the world literature. We describe a case of empyema in a 12 day female child.

KEY WORDS: Empyema; neonate.

INTRODUCTION

Pyothorax is defined as pyogenic infection of the pleural cavity with purulent effusion. Majority of children who are affected are under two years. Though excellent reviews and studies are available regarding childhood empyema,[1] yet reports are scanty as far as neonatal pyothorax is concerned. We are presenting a case of pyothorax that occurred in our Sick Neonatal Care Unit (SCNU).

CASE REPORT

A full term female breastfed second in birth order child weighing 3.5 kg, born by elective caesarean section was admitted in the SNCU on 12th day of life with complaints of breathlessness since 9 days, refusal to feed and decreased activity two days prior to admission. Breathlessness started on 3rd day of life which was insidious in onset progressed slowly over period of 6 days. No antenatal and perinatal risk factors were noted. On clinical examination baby was lethargic, diaphoretic and dyspnoeic with respiratory rate 88/min along with moderate to severe subcostal and intercostal retractions and oxygen saturation at room air was 60% that improved to 92 % with 8 L/min of oxygen.

Examination of respiratory system revealed dull note on percussion all over the right side of chest with decreased air entry. A chest radiograph revealed right pleural effusion with collapse consolidation of right lung and mild degree of scoliosis of dorsal spine due to hemivertebra(D3,D6) & spina bifida at C6 ,C7(fig 1). Intravenous fluids, oxygen and antibiotics were instituted. CT chest with contrast revealed massive right pleural effusion with partial collapse of right lung, minimal consolidation of left lower lobe and large anterior thoracic meningocele (fig 2). MRI chest showed a large anterior thoracic meningomyelocele with no evidence of rupture. Multiple butterfly and hemivertebra in dorsal spine along with right lower lobe collapse and moderate fluid collection in right pleural cavity.

Ultrasound guided pleural tap revealed thick pus which showed loaded WBC, 80% were neutrophils with culture being sterile. Pleural fluid triglyceride and cholesterol were not elevated. Thoracostomy was done and pediatric size 10 Fr portex radio opaque thoracic canula was inserted in 6th intercostal space (fig 3). About 120 mL of pus was drained in the following 72 hrs. Blood culture was sterile. CSF analysis was within normal limits and there was no evidence of hydrocephalus on cranial ultrasound.

Child was treated with antibiotics for three weeks. Child responded well to the treatment and chest tube removed after 5 days. On subsequent follow up, the child was found to have a good expanding lung (fig 4).

FIGURES

fig 1

fig 2

fig 3

fig 4

Fig 1 CXR showing hemiverterbra, scoliosis, right pleural effusion
Fig 2 CT chest showing pleural effusion on right side with collapsed lung
Fig 3 baby with ICD insitu
Fig 4 chest x-rayshowing vertebral anomaly and pleural effusion

DISCUSSION

Although pleural empyema is seen frequently in children, it is very uncommon in neonates. Empyema in the newborn is a condition characterised by its rarity, its rapid course and inability to identify consistent predisposing factors.[2] Poor immune status in early days of life probably accounts for non-localisation of infection to the pleura and thus results in a very low incidence of empyema. Till date only few cases have been reported. The most common agents are [S.Aureaus, E. Coli, Hemolytic group B Streptococci, Group A Streptococci, KlebsiellaSpp and Serretia Spp][3,8] It was difficult to identify a single or more risk factor for empyema, , as the reported cases have occurred independent of weight, gestation, perinatal risks, birth asphyxia, foul smelling liquor, meconium aspiration and preceding infections. Empyema has been noticed as early as 4 hours of birth [8]. In addition to intravenous antibiotics, therapeutic options for empyema include tube drainage and intra-pleural fibrinolysis and thoracoscopy (via VATS) or thoracotomy. The association with anterior meningocele is unique, and it seems to be a incidental finding. Well timed surgical intervention does minimise the morbidity of neonatal empyema. A long term follow up of these patients is also desired in order to assess the impact of fibrotic changes.

REFERENCES

1. Padmini R, Srinivasan S, Puri RK, NaliniP. Empyema in infancy and childhood. Ind pediatr, 1990; 27: 447-452.
2. Raju Gupta, Faridi MMA, Gupta P. Neonatal empyema Thoracis. Ind J pediatr, 1996; 63: 704-706.
3. Nathavitharana KA, Watkinson MA. Neonatal pleural empyema caused by group A Streptococcus. Pediatr Infect Dis J, 1994; 13: 671-672**.**
4. Shen YH, Hwang KP, Niu CK. Complicated parapneumonic effusion and empyema in children. J MicrobiolImmunol Infect, 2006; 39: 483-488.
5. Gıvan DC, Eigen H. Common pleural effusion in children. Clin Chest Med, 1998; 19: 363-371.
6. Beevan DW, Burry AF. Staphylococcal pneumonia in the newborn: an epidemic with eight fatal cases. Lancet, 1956; 2: 211-215.
7. Freij BJ, Kusmiesz H, Nelson JD, McCracken GH. Parapneumonic effusions and empyema in hospitalized children: a retrospective review of 227 cases. Pediatr Infect Dis J, 1984; 3: 578-591.
8. Sokal MM, Nagraj A, Fisher BJ, Vijayan S. Neonatal empyema caused by group B beta hemolytic streptococcus.Chest, 1982; 81: 390-391.