



## Pleural Effusion in the Neonatal Intensive Care Unit

**Heba Azmi Makki\***

Consultant Pediatrician, Palestinian Board of Pediatrics, Al-Nasr Pediatric Hospital, Palestine

\*Corresponding Author: Heba Azmi Makki, Consultant Pediatrician, Palestinian Board of Pediatrics, Al-Nasr Pediatric Hospital, Palestine.

**Received:** October 24, 2020

**Published:** October 30, 2020

© All rights are reserved by **Heba Azmi Makki.**

The causes of pleural effusion in the neonate have a different distribution compared with those in infancy and childhood. Pleural effusions are rare in the neonate and may be associated with several clinical conditions. It can cause significant respiratory morbidity. Thus, pleural effusion in the neonate requires early diagnosis and management.

Pleural effusions in the neonatal period can be congenital or acquired. It may be also divided according to the type of effusion in the pleural space into transudative or exudative pleural effusion [1,2]. Clinical presentation and physical findings depend on the amount of effusion [3]. Pleural effusion in the newborn may be asymptomatic but frequently presents with respiratory distress ranging from mild to severe. Management differs according to type of pleural fluid and on the clinical medical status of the patient [4-9]. General initial management tips include antibiotics to cover infection if suspected or proven with symptomatic management and follow up of pleural effusion. Chest tube insertion is mandatory if no improvement of the clinical situation, worsening of respiratory distress or desaturation [5]. In cases of chylothorax, this requires some more specialized additional management. The initial treatment of chylothorax, beside what was mentioned above, medical treatment with medium chain fatty acid milk formulas should be considered and it showed good results when used in cases in our neonatal nursery. Total parental nutrition and octreotide also can be used [10-12]. Surgical management may be needed like thoracocentesis or lymphatic duct ligation [5]. Agents like talc (Talc Pleurodesis) or others can also be used in case of refractory unresolvable pleural effusion. Another point to be in mind, that we also noted increased incidence of pleural effusion in cases of Down syndrome. Regarding the prognosis, good outcome is the rule in

the neonatal period except in cases of hydrops fetalis which carries a high rate of morbidity and mortality.

In conclusion, pleural effusion in the neonatal period may result from parapneumonic effusion, chylothorax, Hydrops fetalis, iatrogenic like extravasation of percutaneously inserted central venous catheter, congestive heart failure, idiopathic or other less frequently occurring conditions. Diagnostic chest tap is required for subsequent management. Clinicians must be aware of the wide range of disorders causing pleural effusions in the neonatal period to concentrate on the accurate management of each specific case.

### Bibliography

1. Robert M and Kliegman MD. "Nelson textbook 20<sup>th</sup> edition" (2016).
2. Uptodate version 21.6.
3. A Janahi, *et al.* "Epidemiology clinical presentation; and evaluation of parapneumonic effusion and empyema in children Ibrahim" (2013).
4. Balfour-Lynn IM, *et al.* "BTS guidelines for the management of pleural infection in children". *Thorax* (2005).
5. Ibrahim A Janahi, *et al.* "Management and prognosis of parapneumonic effusion and empyema in children (2012).
6. Barnes NP, *et al.* "Medical management of parapneumonic pleural disease. 39 (2005): 127.
7. Hilliard TN, *et al.* "Management of parapneumonic effusion and empyema 88 (2003): 915.

8. Utine GE., *et al.* "Pleural fluid PCR method for detection of Staphylococcus aureus, Streptococcus pneumoniae and Haemophilus influenza in pediatric parapneumonic effusions". *Respiration* (2008).
9. Bradley JS., *et al.* "The management of community-acquired pneumonia in infants and children older than 3 months of age: clinical practice guidelines by the Pediatric Infectious Diseases Society and the Infectious Diseases Society of America". *Clinical Infectious Diseases* 53 (2011): e25.
10. Li ST and Tancredi DJ. "Empyema hospitalizations increased in US children despite pneumococcal conjugate vaccine 125 (2010): 26.
11. Calder A and Owens CM. "Imaging of parapneumonic pleural effusions and empyema in children". *Pediatric Radiology* (2009): 527-237.
12. John E Heffner and Steven A Sahn. "Etiology, clinical presentation, and diagnosis of chylothorax". Geraldine Finlay (2013).

#### Assets from publication with us

- Prompt Acknowledgement after receiving the article
- Thorough Double blinded peer review
- Rapid Publication
- Issue of Publication Certificate
- High visibility of your Published work

**Website:** [www.actascientific.com/](http://www.actascientific.com/)

**Submit Article:** [www.actascientific.com/submission.php](http://www.actascientific.com/submission.php)

**Email us:** [editor@actascientific.com](mailto:editor@actascientific.com)

**Contact us:** +91 9182824667