



Long-Term Respiratory Outcome of Children with Empyema

Mohamed Mustakim Jalunis¹ · Shih Ying Hng² · Kah Peng Eg² · Nadia Fareeda Muhammad Gowdh³ · Anand Sanmugam⁴ · Shireen Anne Nah⁴ · Anna Marie Nathan² · Jessie Anne de Bruyne²

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To the Editor: Recovery post-empyema thoracis in children from a developing country is good with majority having normal lung function [1–4]. We determined the long-term respiratory outcome of children with parapneumonic effusion (PPE) in a middle-income country. This retrospective cohort study included all children with an infective PPE. Respiratory health post-discharge, including lung function test and serial chest radiographs (CXRs) reported by a radiologist were analysed.

Fifty-three children with a median (IQR) age of 3 (2.0, 4.5) y old were included. The etiology was confirmed in 45.3%; positive *Mycoplasma pneumoniae* serology (20.8%) and *Streptococcus pneumoniae* (11.3%) were the common etiologies. The majority (92.5%) were managed medically with chest tubes (62.3%) and urokinase (35.8%). Four patients (7.5%) underwent surgical intervention: two had video-assisted- thoracoscopic decortication, one each had an open decortication and lobectomy. Eighteen patients (34.0%) developed complications, with pneumothorax (22.6%), necrotizing pneumonia (17.0%) and bronchopleural fistula (15.1%) being the most common. During the median (IQR) follow-up of 2.9 (0.65, 5.0) y, 25.5% (n = 13/51) had residual respiratory symptoms: ten had new-onset recurrent wheezing (19.6%), two had recurrent pneumonia, one child had bronchiectasis post-lobectomy. One-third (33.3%) had persistent abnormal CXRs during follow-up but were asymptomatic. Spirometry was abnormal (FEV1 or FVC z

score ≤ -2.00) in 30% (n = 6/20) who could perform it. There was a borderline association between abnormal spirometry and complicated empyema ($\phi = 0.25$, $p = 0.07$).

One in four children had respiratory symptoms, one-third had abnormal CXR and low lung function post-empyema. Studies report between 0–20% with abnormal spirometry results post PPE [1–3]. de Benedictis et al. found mild lung function defects after discharge, which resolved by 5 y regardless of treatment with chest tubes with or without fibrinolytic agents or VATs [4]. Long-term sequelae post-empyema were excellent in children from a middle-income country.

Declarations

Conflict of Interest None.

References

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✉ Anna Marie Nathan
psr9900@hotmail.com

¹ Department of Pediatrics, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia

² Pediatric Respiratory Unit, Department of Pediatrics, University of Malaya, 50603 Kuala Lumpur, Malaysia

³ Department of Biomedical Engineering, University of Malaya, 50603 Kuala Lumpur, Malaysia

⁴ Division of Pediatric & Neonatal Surgery, Department of Surgery, University of Malaya, 50603 Kuala Lumpur, Malaysia