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| **Increasing rates and acuity of paediatric empyema post COVID19 pandemic - single centre experience** |
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| **Introduction/Aim:** Empyema refers to the accumulation of pus or infected fluid in the pleural space, occurring in 1.5% of paediatric community acquired pneumonia. The most common pathogens include *Streptococcus. pneumoniae, Streptococcus. pyogenes*, and *Staphylococcus. aureus*. Management includes intravenous antibiotics, intercostal catheter (ICC) insertion and fibrinolytics, and video-assisted thoracoscopic surgery (VATS). Clinicians have observed an increase in empyema rates and acuity in the years following the COVID19 pandemic. We aimed to compare rates and describe clinical characteristics of empyema cases admitted to a tertiary centre, and compare epochs pre and post pandemic.**Methods:** A retrospective analysis of children (<16 years) managed for empyema in a tertiary paediatric hospital over a 24-month period pre-pandemic (2017-2018) and post-pandemic (2022-2023). **Results:** We describe 170 empyema cases in the study period, with a median age of 3.0years [0.3–15.0years]. Sixty-three were admitted in 2017-18, and 107 were admitted in 2022-23. Children were admitted on average 2 days longer post-pandemic (16.1 vs 14.1 days, *p*=0.004). The majority (87.6%) of cases were managed with ICC and fibrinolytics. Remaining underwent VATS or conservative management. We observed a higher proportion of *S. pyogenes* in 2022-23 compared to 2017-18 (28.0%% vs 4.8%, *p*<0.01). Similar proportions of *S. pneumoniae* 38.3% vs 44.4%) and *S. aureus,* (7.5% vs 11.1%) were observed among the epochs.There were higher proportions of paediatric intensive care unit (PICU) admission post-pandemic compared to pre-pandemic (34.6% vs 26.9%), higher vasoactive treatment (13.1% vs 4.7%), and invasive ventilation (24.2% vs 14.3%). Non-invasive ventilation was also higher post-pandemic (7.4% vs 3.2%). **Conclusion:** The number of admissions with empyema has increased post-pandemic. This was associated with increased length of stay, increased PICU admissions, and use for invasive ventilation or inotropes. The higher rates and acuity may be explained by the higher rates of *S. pyogenes* observed.**Grant Support:** Nil**Key words:** empyema, pneumonia, streptococcus pyogenes |