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| **Empyema: Does Culture Status Matter?** |
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| **Introduction/Aim:**  Pus in the pleural cavity (empyema) is a potentially devastating consequence of lung parenchymal infection with mortality approaching 50% in particular populations. Empyema phenotyping on culture positivity and macroscopic appearance may provide additional prognostic information.  **Methods:**  Retrospective cohort study using records obtained from a tertiary public hospital pathology laboratory for all pleural fluid specimens between 01 August 2018 and 22 September 2023. Individual charts were examined to collect demographic, diagnostic and clinical data. RAPID score was calculated for culture positive results, and 3 month mortality compared between culture positive and negative results.  **Results:**  Over the 5 year period, 61 pleural effusions were concerning for empyema and underwent medical intervention. 41/61 (67%) were demonstrated to be empyema on macroscopic appearance, with 12/41 (29%) demonstrating a positive culture.  The culture positive empyema 3 month mortality was 2/12 (17%). The culture negative empyema 3 month mortality was 6/29 (21%).   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Pathogen** | **n** |  | **RAPID (mortality)** | **n** | **Mortality 3/12** | | *Streptococcus* sp | 6 |  | Low (1.5%) | 5 | 1 | | Other *(mixed anaerobes, Hafnia, Corynebacterium sp*) | 4 |  | Medium (17.8%) | 4 | 0 | | *Staphylococcus* *aureus* sp | 2 |  | High (47.8%) | 3 | 1 | | Other *Staphylococcus* sp | 2 |  |  |  |  | | *Candida* *albicans* | 2 |  |  |  |  |   **Conclusion:**  Whilst numbers are low, our culture positive and culture negative empyemas had a similar mortality rate. *Streptococcus* was the most commonly identified pathogen.  **Grant Support: NIL** |