

8.02 An Audit of pleural fluid analyses in a tertiary hospital

Yvonne Flaherty¹, Keavy Conroy¹, Laura Gleeson^{1,2}

¹ Respiratory Department, St James's Hospital, Dublin 8

² Department of Clinical Medicine, Trinity Centre for Health Sciences, St James's Hospital, Dublin 8

Background: Pleural effusions are common and pleural fluid analysis is an essential diagnostic tool. We sought to evaluate pleural fluid analyses in SJH against the BTS Guideline for Pleural Disease (1).

Methods: A list of all pleural fluid samples received by the SJH Pathology laboratory in 2019 was generated. Electronic Patient Record review was performed, clinical data collected, and collated for analysis.

Results: 229 pleural fluid specimens were identified, associated with 206 procedures. Of 206 procedures, 92 (44.7%) were performed by IR, 47 (22.8%) by Thoracics, 39 (18.9%) by Respiratory, and 28 (13.4%) by others.

Of 229 samples, protein was measured in 118 (51.5%), LDH in 123 (53.7%), routine culture in 161 (70.3%), and TB culture in 155 (67.7%). Where the procedure was performed by the Respiratory Team, a sample was more likely to be sent for measurement of protein (85%), LDH (90%), and culture (92.5%).

The BTS guideline-recommended minimum sample volume of 25mL for cytological analysis was achieved in only 101 samples (44.1%). Median volume of fluid sent for cytological analysis was 20mL, irrespective of team.

Conclusions: Pleural fluid biochemical analyses are underutilised in SJH, and pleural fluid volume sent for cytological is less than that recommended by BTS guidelines in the majority of cases. Respiratory teams are more likely to request guideline-recommended analyses.

Keywords: Pleural, Effusion, Fluid Analysis.

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References:

1. Roberts ME, Rahman NM, Maskell NA, Bibby AC, Blyth KG, Corcoran JP, et al. British Thoracic Society Guideline for pleural disease. *Thorax*. 2023.