9.10 Evaluation of Pleural Fluid Cytology for the Diagnosis of Malignant Pleural Effusion in A Single, Tertiary Centre

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Introduction: Malignancy and infection remain the most common cause of unilateral undifferentiated pleural effusions. Pleural cytology should be a standard test especially if malignant pleural effusion is suspected but local estimate for sensitivity remains unknown[1].

Methods: We conducted a retrospective study on pleural fluid cytology that was sent to the histopathology department in Our Lady of Lourdes Hospital from July 2022-July 2023. Demographic, radiologic and cytologic data were collected using the iPIMS, NIMIS and Winpath systems. Statistical analysis was performed using Prism GraphPad 7.05.

Results: Thirty-two pleural fluid samples were sent to the histopathology lab. Forty-three percent (n=26) were subsequently diagnosed as unilateral pleural effusion. Twenty-two (85%) were confirmed as malignant pleural effusion on the first pleural sampling. Cancer sites include lung n,% (9,40) breast (7,31), ovary (2,9) lymphoma (1,5), and unknown (3,13). One pleural fluid was classified as a transudate based on Light's Criteria. Multivariate logistic regression demonstrated the highest odd ratio (OR, 95% CI) for known malignancy (4.2,3.1-7.9), unilateral effusion (2.1, 1.4-2.9) and exudate effusions (1.9, 1.5-2.6).

Conclusion: As a single, tertiary hospital, we report a high sensitivity for pleural fluid cytology for malignant pleural effusion. As there is a wide variation of sensitivity reported, local estimates are important to inform clinical practice.

References:

[1]British Thoracic Society Guidelines for pleural disease, Thorax 2023;78s1-s42

Conflict of Interest: *None to declare*