S13 ROLE OF FROZEN SECTION DURING MEDICAL THORACOSCOPY FOR DECISION MAKING IN A COUNTRY WITH DECREASING TB BURDEN

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Rationale On-site pathologic diagnosis of pleural disease during medical thoracoscopy (MT) is expected to be useful in diagnosis of pleural effusion with unknown etiology. There were only few studies investigating utility of a frozen section examination during MT. This study aimed to demonstrate the diagnostic performance of frozen section examination during MT in diagnosis of pleural malignancy or pleural TB.

Methods Medical records of patients who underwent medical thoracoscopy with frozen section examination between October 2017 and April 2023 in Incheon Saint Mary’s Hospital, the Catholic University of Korea were retrospectively reviewed. Final diagnosis of pleural diseases was classified into pleural malignancy, pleural TB and other benign pleuritis. Results of frozen section were classified into malignancy, atypical cells, chronic granulomatous inflammation, and other benign inflammation. Diagnostic performance of frozen section examination was investigated with each reference standard – the results of pleural tissue examination or final composite diagnosis of pleural disease.

Results A total of 444 patients were included. Number of patients with pleural malignancy, pleural TB and other benign pleuritis was 217, 59, 167, respectively. One patient was diagnosed ad pleural malignancy and pleural TB, concurrently. Among patients with pleural malignancy, non-small cell lung cancer – adenocarcinoma accounted for 66.5%. Among patients who showed atypical cells in frozen section, 44.4% were finally diagnosed as pleural malignancy. The frozen section result ‘malignant’ showed 84.3% (95% CI: 78.8–88.9) of sensitivity on diagnosis of pleural malignancy, and 83.5% (77.7–88.3) of negative predictive value (NPV). The frozen section results of ‘malignancy or atypical cells’ showed 96.8% (93.5–98.7) of sensitivity with 79.5% (72.7–85.3) of specificity. The frozen section result ‘chronic granulomatous inflammation showed 93.2% (83.5–98.1) of sensitivity on diagnosis of pleural TB, and 98.1% (95.1–99.5) of NPV (table 6).

Conclusions Frozen section examination during MT showed good sensitivity in diagnosis of pleural malignancy or pleural TB. With this diagnostic modality, diagnostic delay could be shortened and patients could be provided with adequate treatment such as pleurodesis or anti-TB medications, quickly.

S14 A SURGE OF PAEDIATRIC THORACIC EMPIEYMA: IDENTIFYING TRENDS AND LESSONS FROM THE UK INVASIVE GROUP A STREPTOCOCCUS (iGAS) OUTBREAK DURING 2022–2023

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Introduction We present a retrospective review as a specialist-paediatric centre, managing empyema over an 8-year period, including an unexpected surge during the 2022–23 UK invasive Group A Streptococcus (iGAS) outbreak.


Results 86 patients were identified. Median age in the post-pandemic, pandemic and pre-pandemic eras were 4.4, 6.2 and 9.9 years respectively (p<0.0001, ANOVA). 61/84 patients had sterile cultures (73%). 16S PCR assays identified bacterial DNA in 90.7% (39/43) of cases. The most common microorganisms identified were Streplococcus pyogenes (n=23, 43.4%) and Streptococcus pneumoniae (n=16, 30.2%) with viral co-infection more frequently seen with these two species; as compared with all other species (12/39, 30.8%, 3/37, 8.1%).

Most concerning was the finding of viral co-infection in 45% (5/11) of cases with necrotising disease compared with 24% (10/42) without (p = 0.2, chi-sq). 48% (11/23) of patients required surgery (VATS/thoracotomy/decortication/resection) in the post-pandemic compared with 19% (11/57) pre-pandemic (p=0.0097, chi-sq). Median length of stay for patients had also increased from 8 days pre-pandemic to 11 days post-pandemic (p=0.0532, Mann-Whitney U).

To date no mortalities from bacterial empyema were reported at our centre though there were deaths from iGAS without empyema.

Conclusion Our findings highlight 16S PCR as a diagnostic tool in empyema management as culture is frequently sterile. Association of viral co-infection on outcomes was substantial, correlating with higher necrosis rates, surgical intervention and prolonged hospital-stay. This suggests immunological naivety amongst young-children after Covid-19 may be a crucial factor in the severity of follow-on bacterial superinfection. We advise attention to viral outbreak reports in the upcoming winter-flu-season, which could signal another empyema outbreak. With good collaboration and prompt treatment, good outcomes should be expected.

S15 SENSITIVITY OF SURGICAL PLEURAL BIOPSYs FOLLOWING A PREVIOUS NEGATIVE PLEURAL BIOPSY

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Introduction and Objectives Ultrasound-Guided (USG) and Local-Anaesthetic Thoracoscopy (LAT) Pleural Biopsies are performed to investigate pleural disease. Though often sufficient to make a diagnosis, biopsies can be indeterminate or negative, despite a clinical picture favouring malignancy. Such patients may be referred for surgical biopsies. The aim of this study was to determine the sensitivity of surgical biopsies following previous negative USG or LAT biopsies.

Methods We conducted a retrospective review of patients who underwent an USG or LAT biopsies at a tertiary centre between January 2017 and June 2023. Features and outcomes of those referred to surgery were recorded, including follow-up duration, initial histology, reason for referral and eventual diagnosis.

Results Eighty-five patients underwent USG biopsies and 115 had a LAT. Following MDT discussion, 18 were referred to surgery (8 USG biopsy, 10 LAT). Initial histology in these