P4 ISOLATED MEDIASTINAL LYMPH NODE TUBERCULOSIS (IMLNTB) IS CHARACTERISED BY ELEVATION IN SYSTEMIC AND BRONCHIAL IL-12 PATHWAY MEDIATORS COMPARED TO PULMONARY TB

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Introduction/Aims The incidence of isolated mediastinal lymph node tuberculosis (IMLNTB) has increased in recent years in the UK. These patients exhibit a distinct clinical phenotype compared to patients with pulmonary TB (PTB), more likely to be asymptomatic or presenting with immune hypersensitivity. The mediastinal lymph nodes are of particular interest in TB as they have been implicated as a key site for host-pathogen interaction, the outcome of which determines infection status within the dynamic spectrum of disease. Indeed, studies have suggested that IMLNTB may represent a sub-clinical phenotype with a greater degree of immune containment compared to PTB. This study assessed immune status in patients with IMLNTB, PTB and healthy controls with the hypothesis that these states vary in levels of protective immunity.

Methods A novel sampling technique using a synthetic absorptive matrix (bronchosorption) placed on the respiratory mucosa of the bronchus was used to obtain mucosal lining fluid (MLF) of patients undergoing bronchoscopy. Serum samples were also collected in addition to clinical, radiological and demographic data. Eluted bronchosorption fluid, together with serum, were then analysed for a range of soluble inflammatory mediators using a multiplex immunoassay platform.

Results Patients with IMLNTB (n=12) had elevated levels of IL-12/IL-23-p40 in both the serum and bronchial MLF compared to patients with PTB (n=12) and healthy controls (n=19). In addition, IL-12 induced IFN γ pathway mediators, including TNF- α , were elevated in the serum in the IMLNTB group. Conversely, levels of serum acute phase reactants (CRP/SAA) were elevated in PTB compared to IMLNTB and healthy controls.

Conclusion These Results suggest that IMLNTB and PTB have different molecular phenotypes, with IMLNTB showing less systemic inflammation in the form of serum CRP/SAA, but greater or equal levels of levels of certain immune mediators in both the serum and the bronchus. These findings may reflect that IMLNTB is a distinct clinical state to PTB, with immune activation through the IL-12 pathway playing a role in achieving immune containment.

P5 PLEURAL TUBERCULOSIS IN LONDON: A PERSISTENT DIAGNOSTIC CHALLENGE

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Background Five percent of disease due to *Mycobacterium tuberculosis* is reported to be associated with a pleural effusion. We conducted a retrospective review of all patients at our institution treated for pleural tuberculosis (TB) between 2010 and 2015, reviewing demographics, fluid microbiology, histology, and radiology to characterise our cohort and review diagnostic certainty.

Results 71% (36/51) of our cohort were male; with a mean age of 41 years. 59% of cases had clear evidence of concurrent parenchymal involvement (five did not have cross sectional imaging). All effusions were exudates. 46 patients had imaging one year after treatment started. 16/46 had residual fluid, 16/46 demonstrated complete resolution and 14/46 had pleural thickening. Pleural fluid TB culture was performed in 47/51 patients and was positive in 43% of cases. Pleural fluid TB PCR was performed in 18/51 patients. 3/18 were PCR positive; in 1 patient PCR provided a diagnosis 10 days before culture. Two PCR Results provided diagnoses despite negative cultures and demonstrated a rifampicin resistance mutation in one case. 21 pleural biopsies were done, 13 were video assisted thoracoscopic procedures and 8 were taken with closed cutting needles. Pleural biopsy TB culture was

Abstract P5 Figure 1