performed on 16/21 samples. 63% (n=10) were culture positive. 4/6 culture negative samples that were sent for histopathology also demonstrated granulomas. The combined yield of fluid and biopsy culture in addition to fluid PCR was 57% in our cohort increasing to 65% when histology is included. 4 patients had a positive culture or PCR from another site. 15/51 (29%) of patients were treated empirically without positive TB cultures, positive TB PCR results, or granulomas on biopsy.

Conclusions This analysis demonstrates that the characteristics of our cohort are similar to previously reported cohorts; that TB PCR of pleural fluid has provided some diagnostic benefits, but that there remains diagnostic uncertainty in a significant proportion of patients. New tools are required to improve diagnostic accuracy of this difficult disease and we propose that NICE-approved analysis of fluid for adenosine deaminase may be a useful additional investigation for this patient group.

P6 OCULAR TUBERCULOSIS: A SURVEY OF UK CLINICAL PRACTICE

¹R Hussain, ²H Petruskin, ¹C Barraclough, ³H Kunst, ²C Pravesio, ¹VLC White, ³JL Potter. ¹Barts Health NHS Trust, London, UK; ²Moorfields Eye Hospital NHS Foundation Trust, London, UK; ³Queen Mary University London, London, UK

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Background Ophthalmic manifestations of tuberculosis (TB) are described as inflammatory events in one or both eyes involving the uvea, optic nerve or orbit. The diagnosis is almost always presumptive as mycobacterium are rarely cultured from ocular/periocular tissues. Ocular TB is rare in the developed world and there is a general lack of consensus regarding diagnosis and treatment duration. We surveyed UK specialists involved in the diagnosis and treatment of tuberculous uveitis to examine current clinical practice.

Method A previously validated survey based on two clinical cases (one more likely to have TB, one less likely to have TB) was used to examine diagnostic and treatment practices amongst consultants from three different specialities across different institutions in the UK: ophthalmologists with an interest in uveitis, respiratory, and infectious disease (ID) physicians with a TB interest.

Results Ten ophthalmologists, 24 ID and 29 respiratory physicians completed the survey. Responses varied greatly within the same specialty as well as between different specialities. For example, in a patient with chronic granulomatous panuveitis and a known TB risk factor, the pre-test likelihood of having ocular TB varied significantly within the groups: ophthalmologists (range 5%–95%), respiratory (range 20%–99%), ID (range 9%–90%). Similarly, for the same scenario, there was disagreement in the optimal duration of treatment. Whilst the majority of clinicians would treat for 6 months, 17 clinicians (24%) – ophthalmologists [3], respiratory [5], ID [9] – would treat for longer than 6 months. All 10 ophthalmologists (100%) would defer antibiotic treatment decisions to a TB specialist rather than initiate treatment themselves. All ID and respiratory physicians would screen for HIV if ocular TB was suspected, whereas only 6 (60%) of ophthalmologists would.

Conclusion Diagnosis of ocular TB is challenging due to lack of a gold standard test. Expert consensus is therefore important to ensure the right patients are treated appropriately. This is the first multidisciplinary survey within the UK capturing a

spectrum of opinions regarding ocular TB. The Results highlight a lack of consensus both within and between different specialties in the field. An open dialogue between relevant stakeholders is key to harmonising diagnostic and treatment strategies.

P7 TUBERCULOSIS IN DIFFERENTIAL DIAGNOSIS OF INTRATHORACIC LYMPHADENOPATHY IN A ENDEMIC COUNTRY – IS EBUS-TBNA A USEFUL TOOL?

¹LM Santos, ²M Jacomelli, ³VR Figueiredo. ¹Pneumology Unit, Hospitais da Universidade de Coimbra, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal; ²Respiratory Endoscopy Service, Pulmonary Division of Heart Institute (InCor), Hospital das Clínicas, Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil

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Background Tuberculosis (TB) remains a global public health concern.¹ It is one of intrathoracic lymphadenopathy (ITLN) numerous causes and must be taken into account in differential diagnosis, especially in endemic countries.² Diagnostic yield of EBUS-TBNA for mediastinal and hilar TB has been reported to be 80%.²

Aim To determine the prevalence of TB in patients with ITLN undergoing EBUS-TBNA and calculate diagnostic yield.

Methods Retrospective study of all patients undergoing EBUS-TBNA for ITLN, from August/2011 to March/2017. Clinical, laboratorial, histopathological and radiological data were assessed. We considered for diagnosis by EBUS-TBNA all cases with TB confirmed and granulomatous lymph node with TB confirmation by other methods.

Results 186 patients were included, mean age of 57 years (SD=14), 53.8% male. Granulomatous disease was diagnosed in 29% (n=54), 42.6% (n=23) with cancer diagnosis or suspicion at the time of procedure. Sarcoidosis was diagnosed in 15.6% (n=29), mycobacteriosis in 9.7% (n=18), fungal infection in 2.7% (n=5) and other granulomatosis in 1% (n=2). Mycobacteriosis was due to *M.tuberculosis* in 88.9% (n=16), *M.kansasii* in 5.55% (n=1) and *M.avium* in 5.55% (n=1). EBUS-TBNA established the diagnosis in 56.3% (n=9) of TB cases: 25% (n=4) caseous granuloma in cell block, 18.8% (n=3) positive acid-fast bacilli (AFB) and 12.5% (n=2) *M. Tuberculosis* in aspirated sample culture. In 37.5% (n=6) cell block from EBUS-TBNA showed granulomas but definite diagnosis was made by presence of caseous granuloma in biopsy (12.5%, n=2) or positive AFB (6.25%, n=1) in other organs, positive PCR of bronchoalveolar lavage in 6.25% (n=1) or pleural fluid in 6.25% (n=1), and sputum culture in 6.25% (n=1). One patient needed mediastinoscopy. 25% (n=4) of patients diagnosed with TB had cancer and 31.6% (n=5) was submitted to EBUS-TBNA for cancer suspicion. In our setting, the prevalence of TB was 8.6% and the diagnostic yield of EBUS-TBNA was 77.7%.

Conclusions Our study showed granulomatosis in 29% of patients with TB as second most frequent cause. Brazil belongs to the five countries that collectively account for about 50% of the world TB cases¹ and, despite lymphadenopathy is not a major form of TB, our study emphasises its importance in differential diagnosis of ITLN in endemic countries. EBUS-TBNA showed to be a useful diagnostic tool.

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P8 EPIDEMIOLOGY OF TUBERCULOSIS IN NORFOLK

A Bhamani, D Terrington, R Phillips. *Norfolk and Norwich University Hospital, Norwich, UK*

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The incidence of tuberculosis in England has shown a year-on-year decline over the past four years. The main burden of disease has been concentrated in larger urban areas. The East of England is an area of low prevalence and in 2015, had the lowest rate of TB cases notified per 1 00 000 people (6.2). London, the West Midlands and the North-West had the highest rates in the country. The population demographic of Norfolk shows a variation when compared to the rest of England. In 2011, 21.4% of Norfolk's population was aged 65 or over compared with 16.5% in England. Similarly, 94.3% of people in Norfolk were identified as white compared to 87.5% in England.¹ We hypothesised that these differences would be reflected in the demographics of patients treated for Tuberculosis at the Norfolk and Norwich University Hospital (NNUH). We analysed data over a 3 year period between 2014 and 2016. While most patients were diagnosed and treated locally, patients had been diagnosed elsewhere and moved to the local area after commencing treatment. One patient moved abroad following diagnosis. Our incidence of Tuberculosis was significantly lower than the national rate. Forty-six patients were diagnosed with TB in the 3 year period. This equates to 2.47 new cases per 1 00 000 people compared to 10.5 per 1 00 000 nationally in 2015. Four cases were Isoniazid resistant (8.7% compared to 6.9% nationally). There was one case of multi drug-resistant TB. Fourteen cases did not have microbiological cultures. In our patient group, 67.3% were born outside the UK compared to 72.5% nationally. Twenty-one of the twenty-three patients aged less than 40 were born abroad. However, all of the seven patients 65 and above were UK-born. Additionally, of the twenty patients with extra-pulmonary disease (with or without pulmonary involvement), only two were born within the UK. These trends are similar to those seen nationally. Furthermore, the incidence of TB locally peaked in the 25–29 age group reflecting national figures.² Our analysis shows that contrary to our hypothesis, there is no significant difference in the TB population in a low-incidence area compared to high-incidence areas.

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P9 IMPACT OF THE 2016 TUBERCULOSIS GUIDELINE ON A SINGLE PAEDIATRIC TB CENTRE IN THE UK

L Turnbull, R Anderson, C Bell, F Child. *Royal Manchester Childrens Hospital, Manchester, UK*

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Background NICE released an updated Tuberculosis (TB) guideline in January 2016. Compared with the 2011 guideline

this reduced the Mantoux threshold from 15 mm to 5 mm irrespective of BCG status, thus increasing the number of patients requiring assessment for latent TB infection (LTBI) and TB disease. In 2015 we predicted a paediatric workload increase of 37%.¹

Objectives To determine the impact of the 2016 guideline on the number of children diagnosed with LTBI and TB disease.

Methods A retrospective analysis of children aged <16 years attending our TB service January–December 2016. All children were assessed by a TB nurse followed by a consultant if there were concerns about LTBI or TB disease. Management followed 2016 NICE guidelines. Treatment given was then compared with that recommended in the 2011 guidelines.

Results 411 children were seen by the TB nurse. Of these, 294/411 fulfilled the 2016 criteria for screening (new entrants and pulmonary contacts). 50/294 (17%) had a positive Mantoux. Based on Mantoux Results 40/294 (14%) were diagnosed with LTBI. 9/294 (3%) had TB disease. Following the 2011 guideline 22/294 (7%) had a positive Mantoux with 16/294 (5%) treated for LTBI and 6/294 (2%) for TB disease. Of those with positive Mantoux tests, IGRA tests were positive in 20/40 (50%) and 14/22 (64%) of the 2011 and 2016 guideline groups respectively (Table 1). 43 additional children (household contacts of non-pulmonary disease) would have been screened by the 2011 but not the 2016 guideline. These children were seen in our clinic. None had TB disease but 8 had Mantoux ≥5 mm (1 IGRA positive).

Conclusion Compared with the 2011 version, the NICE 2016 TB guideline more than doubles the number of children receiving chemoprophylaxis for LTBI but identifies 33% more children with TB disease. Not screening household contacts of non-pulmonary cases Results in a 14.6% reduction in referrals but also misses a significant number of children with a positive mantoux.

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Abstract P9 Table 1 Number of patients referred for contact tracing or new entrant screening by mantoux test results and TB disease status

Guideline	Mantoux	LTBI	TB disease	No LTBI or TB disease	Total
2011	Positive	16	6	0	22
	Negative	33	4	235	272
2016	Positive	40	9	1	50
	Negative	9	1	234	244

P10 THE ROLE OF FDG-PET CT IMAGING IN OCULAR TUBERCULOSIS

¹CS Sethi, ¹M Bhalla, ¹MR Stanford, ²L Martin, ²G Russell, ²OM Kon. ¹Western Eye Hospital, Imperial College Healthcare NHS Trust, London, UK; ²St Mary's Hospital, Imperial College Healthcare NHS Trust, London, UK

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Ocular tuberculosis (OTB) remains a presumptive clinical diagnosis, based on indicative ophthalmic features and prior exposure to TB. Ocular sampling is unhelpful, so the diagnosis is supported by evidence of subclinical TB remote to the eye