Methods Data on adult patients undergoing LTBI screening before anti-TNFα commencement were collected prospectively between Jan '13 and Dec '14. The local screening protocol included clinical assessment, chest X-ray (CXR) and an ELISpot-TB assay. Where required, routine chemoprophylaxis was isoniazid for 6 months (anti-TNFα was started ≥1 month). Clinical follow-up data was obtained for 6 months post anti-TNFα commencement.

Results 472 patients received anti-TNFα for a minimum of 6 months after LTBI screening. According to the local protocol 21 cases (4.5%) received chemoprophylaxis vs. 66 patients (14%) who would have received chemoprophylaxis if the BTS guideline had been applied (Table 1). Moreover, 5 white, UK born, patients were identified that would not have been risk stratified to receive chemoprophylaxis according to the BTS. 2 cases receiving adalimumab for psoriasis developed active TB during the follow-up period. Both had negative IGRA at screening and were not given chemoprophylaxis however, both would have received treatment according to the BTS protocol. One case resulted from a subsequent TB exposure. The other had an abnormal screening CXR. This result was not appropriately followed up hence the case did not necessarily represent protocol failure *per se*.

Conclusions These preliminary data demonstrate the value of an LTBI screening IGRA based protocol by decreasing the need for chemoprophylaxis by 69% if BTS recommendations had been applied.

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P256 CLINICAL SEQUELAE OF TUBERCULOSIS IN CHILDREN ATTENDING A SINGLE UK CENTRE: AN 11 YEAR RETROSPECTIVE STUDY

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Introduction Although public health outcomes in tuberculosis (TB) are widely reported in the literature, there is little information on clinically important sequelae particularly in children. The aim of this study was to collect clinical outcome data on a cohort of children treated for TB in a tertiary children's hospital in the UK.

Method We performed a retrospective study of all children attending our centre aged <16 years who started treatment for TB disease between January 2003 and December 2013. Patients with latent TB were excluded. Children were divided into 2 groups: symptoms (suggestive of TB) or screening (new entrants and TB contacts) depending on their clinical presentation. Information about symptoms, comorbidities, diagnostic tests, treatment, side effects and clinical outcomes (end of treatment) was collected from medical records and enhanced TB surveillance reports.

Results 209 patient episodes in 205 children were identified (4 retreated ≥6 months after initial treatment); 96(47%) male; mean age 8.6 years (range 0.1–15.8); 40% Asian, 32% Black African, 19% White. Following WHO guidelines 49(23.4%) were definite (culture positive), 152(72.7%) probable and 8 (3.8%) possible cases. 92(44%) presented with symptoms, 117 (56%) through screening (111 contacts, 6 new entrants). Site of disease was pulmonary in 53%, hilar lymphadenopathy in 25%, military in 3%, central nervous system in 5% and other in 14%. Drug resistance was unusual (single 4%; multi 2%). All were HIV negative. The majority received quadruple therapy (84%), 27(13%) triple and 7(3%) other TB-drug regimes.

Clinical outcomes were determined for 196 patients (see Table 1). All 14(7%) with adverse outcomes (including 1 death) presented with symptoms ($p < 0.001$). Samples for culture were obtained in 118 (74(80%) symptomatic; 44(38%) screened). Positive cultures were significantly more common in the symptomatic group (64%) compared with the screened group (4.5%; $p < 0.001$) and in those with an adverse outcome (86%) compared with good outcome (36%; $p = 0.002$).

Abstract P256 Table 1 Clinical outcomes

	Symptoms group	Screening group
Adverse outcome:		
Death	1	0
Neurological sequelae	3	0
Significant structural lung disease	9*	0
TB arthritis	1	0
Ileocaecal stricture	1	0
Total	**14/89 (16%)**	**0/106 (0%)**
Good outcome:		
Normal CXR, no symptoms	54	84
Minor CXR changes	19	20
Symptoms not due to TB	2	2
Total	**75/89 (84%)**	**106/106 (100%)**

*1 also had neurological sequelae n = 195/209.

Conclusion TB is not a benign disease in children. This study shows that clinical outcomes are significantly worse in those who present with symptoms compared with those identified through screening and reminds us of the importance of identifying children at risk of TB infection early.

P257 MODERN DAY SCROFULOUS SWELLINGS: BREAST TUBERCULOSIS IN EAST LONDON

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Introduction Breast tuberculosis (TB) is rare and diagnosis may be delayed. It was first described in 1829. Incidence is highest in TB endemic areas. Here we describe a series of cases diagnosed in East London (UK).

Methods We conducted a retrospective study of all patients treated at our institution for breast TB between 2005 – 2015. Data including demographics, symptoms, microbiological, histological diagnoses and treatment outcomes were recorded.

Results 35 cases of breast TB were identified (1 male). Mean age at diagnosis was 33 years (range 16 – 63). 24 patients were from the Indian subcontinent, 3 Asian other, 7 Black-African and 1 Middle Eastern; no patients were Caucasian. Three patients were lactating, two were pregnant. Four patients had a previous

history of TB and one was HIV positive. All patients presented with a breast lump, 58% in the upper outer quadrant. 25 patients initially presented to their general practitioner (GP), of which 24 were referred to breast clinic and 1 directly to TB clinic. Eight cases presented to hospital. In two cases there was insufficient data. The breast lump was associated with skin changes in six cases, inverted nipple in three, discharge in one, and 49% had ipsilateral axillary lymphadenopathy. Erythrocyte sedimentation rate and C-reactive protein was raised in 84% and 53% cases respectively. Thirty percent of patients had abnormal mammography, 68% abnormal ultrasound breast findings. 25 out of 35 cases had biopsies/fine needle aspirations (FNA), all of these were sent for culture; 17 were culture positive with 3 drug resistant cases. Nine cases had necrotising granulomatous changes on histology, of which 1 was positive for Ziehl-Neelson (ZN) stain, 9 cases had non-necrotising granulomas, of which 2 were ZN positive, and 7 cases had inflammatory changes only (none were ZN positive). All patients received at least three anti-tuberculous drugs. Median treatment duration was six months, leading to complete resolution of breast TB.

Conclusion This case series highlights the difficultly in diagnosing breast TB. Raising awareness of the classical presentation of breast TB amongst GPs and breast services may improve diagnosis and treatment of this rare disease.

P258 MULTI-DRUG RESISTANT TUBERCULOSIS MONITORING GUIDANCE: ARE WE FOLLOWING THE NATIONAL GUIDELINES?

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Introduction Multi-Drug Resistant Tuberculosis (MDR-TB) is a form of TB that is resistant to the two most powerful first-line anti-tuberculosis antibiotics available, rifampicin and isoniazid. Between 2004 and 2011, the proportion of cases with MDR-TB increased from 1.2% to 1.6%, of which it has remained stable over the past 3 years. Due to the complexity of treatment regimens used for MDR-TB, national monitoring guidelines have been developed to aid monitoring for adverse effects during treatment.[1] A previous study identified that prior to the development of these monitoring guidelines the incidence of adverse effects associated with MDR TB medicines was high.[2]

Objective To establish whether national guidelines for the monitoring of MDR-TB medicines at a tertiary centre are being adhered to.

Results 9 patients with MDR-TB were included in the audit. The findings (see Table 1) show that baseline monitoring was not undertaken in the majority of patients. Whilst on-going monitoring was predominantly undertaken in over 80% of occasions, the audit standard was not met.

Conclusions Despite the presence of national guidance to support the monitoring of complex regimens for MDR-TB, this audit shows that monitoring of these in a tertiary centre is below the audit standard. Whilst adherence to on-going monitoring parameters were usually undertaken in over 80% of instances, it is of particular concern that baseline monitoring was significantly below the audit standard. Pharmacists are ideally placed to support the safe and effective monitoring of these often toxic medicines. The development of a pharmacist to support the TB clinics and specifically to support the monitoring of patients with MDR-TB could significantly improve this adherence and reduce the risk of adverse effects as a result of sub-optimal monitoring.

Abstract P258 Table 1

Drug	Number of patients taking drug [n = 9]	Baseline monitoring carried out (%)	On-going monitoring carried out (%)	Drug specific monitoring carried out (%)
Amikacin	6	58%	85%	91%
Capreomycin	1	81%	85%	**100%**
Clofazamine	3	71%	90%	55%
Co-amoxiclav	3	38%	77%	**N/A***
Cycloserine	9	61%	82%	91%
Ethambutol	4	64%	84%	52%
Linezolid	4	66%	82%	48%
Moxifloxacin	6	72%	84%	17%
PAS	4	53%	82%	94%
Prothionamide	8	60%	83%	53%
Pyrazinamide	3	46%	71%	**N/A***
Rifampicin	1	69%	72%	**N/A***

*Drugs did not require specific monitoring, according to drug monographs.

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P259 CENTRAL NERVOUS SYSTEM TUBERCULOSIS: DIAGNOSTIC DIFFICULTIES

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Introduction Central nervous system (CNS) tuberculosis (TB) is difficult to diagnose. There is often a delay in diagnosis and a lack of robust diagnostic criteria.

Methods We conducted a retrospective study of all patients treated at our institution for CNS TB from 2009–2014 excluding those with HIV co-infection. Data including demographics, symptoms, microbiological and radiological features was recorded.

Results 55 cases of CNS TB were identified. The mean age was 36 (4 months – 81 years). Most patients were from the Indian Subcontinent (70.9%), 10.8% were from South East Asia, 1.8% from Africa, 10.9% were UK born and 5.5% were unknown. Symptoms and signs at presentation included headache (67.3%), fever (49%), confusion (34.5%), focal neurological deficit (27.3%), weight loss (27.3%), night sweats (23.6%), altered GCS (23.6%) and seizures (20%). 29% of patients also had pulmonary TB, 11% had TB lymphadenopathy and 11% had miliary TB.

89% of patients had a CT head, of which 42.8% were reported normal, 28.5% reported tuberculomas, 14.2% hydrocephalus and 20.4% exhibited other abnormalities. 87% had an MRI head, of which 10% were normal, 39.6% reported tuberculomas, 33% meningeal enhancement, 6% hydrocephalus, and 23% demonstrated other abnormalities.

Lumbar puncture (LP) was performed in 73% of cases, and CSF protein was elevated in 73% of these. The WCC was elevated in 60% with 63% having a predominant lymphocytosis.