P255 UTILITY OF A SCREENING PROTOCOL INCORPORATING AN INTERFERON-GAMMA RELEASE ASSAY (IGRA) ON DETECTION AND DECISION TO TREAT LATENT TUBERCULOSIS INFECTION (LTBI) PRIOR TO ANTI-TNF THERAPY

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Introduction Anti-TNFα treatment is associated with a significant risk of LTBI reactivation (median onset 12 weeks for infliximab). Patients are therefore recommended to undergo prior LTBI screening but current NICE and BTS guidance differ in their approach. In particular, the BTS places more emphasis on demographic factors (age, ethnicity, birth outside the UK) in stratifying risk and does not mandate routine IGRA use.[1] We describe the effect of local Trust screening protocol, incorporating IGRA, in the diagnosis and decision to start anti-TB chemoprophylaxis in a large cohort of patients being worked-up for anti-TNFα therapy.

Abstract P255 Table 1 Characteristics of patients included in the study

		Screening with IGRA test (n=472)			
		positive(n=27)		negative (n=445)	
Age (years; mean ±SD)		48±13		39±13	
Ethnicity	Black African	2		22	
	Indian subcontinent	4		29	
	White UK born	9		270	
	White non UK born	8		68	
	Other	4		56	
Indication for anti-TNF therapy	Ankylosing spondylitis	4		34	
	Crohn's Disease	5		168	
	Psoriasis	7		134	
	Rheumatois arthritis	7		79	
	Other	4		30	
Anti-TNF therapy	Adalimumab	12		222	
	Certozulimab	2		40	
	Etanercept	6		37	
	Golimumab	0		18	
	Infliximab	7		128	
		LTBI Tx	**No LTBI Tx**	**LTBI Tx**	**No LTBI Tx**
		19	8**	2*	443
LTBI diagnosed by BTS protocol	Yes	5	0	2	59
	No	9	7	0	333
	No data available	5	1	0	51
Active TB diagnosis		0	0	0	2

* Diagnosis based on CXR and/or clinical assessment
** History of active, fully treated TB in the past

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.

REFERENCE

1 Ormerod, *et al*. BTS recommendations for assessing risk and for managing Mycobacterium tuberculosis infection and disease in patients due to start anti-TNF-α. *Thorax* 2005;**60**:800–805

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