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Title: The significance of a mycobacterial isolate in a low tuberculosis prevalence setting

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Body: Introduction: The incidence of tuberculosis in semi-rural Staffordshire is very low, around 2.8/100,000/year (1). We reviewed the significance of identifying mycobacteria in this population. Methods: Retrospective analysis of patients from our institution with mycobacterium isolated from 1st Jan 2007 to 31st July 2011, with follow up until 1st Nov 2011. For patients with multiple isolates, the first species isolated was recorded. Results: 67 patients were identified. Demographics of the M. tuberculosis(MTB) and non-tuberculous mycobacteria(NTM) patient groups are in Table 1. 22/43(51%) of the NTM samples were considered significant and treated. Patients with NTM were older and more likely to die ($p<0.001$). Chronic lung disease was present in 11(50%) of the treated NTM patients, and none of the MTB patients. 3 skin biopsies and 1 urine sample were +ve for NTM. Mycobacterial species isolated included 22 M. avium intracellularae, 6 gordonae, 4 chelonae, 3 kansassii, 3 malmoense, 2 xenopi and 1 each of shimoidei, marinum and interjectum.

Table 1

	MTB	NTM
Patient numbers	24 (36%)	43 (64%)
Males	13 (54%)	24 (56%)
Ages (Mean +/- SD)	42 +/- 21	66 +/- 10*
Death at end of follow up	1 (0.04%)	10 (23%)*
Pulmonary samples	16 (66%)	40 (93%)*
Smear +ve pulmonary samples	8 (33%)	6 (14%)

*$p<0.001$

Conclusions: Isolates of NTM were nearly twice as common as MTB. The diagnosis should particularly be considered in older patients with underlying lung disease. Isolation of a NTM requires careful assessment of its significance and pathogenicity. The incidence of NTM infection seems to be increasing(2). 1. www.hpa.org.uk, accessed Dec 2012. 2. Martin-Casabona N et al, Int J Tuberc Lung Dis 8(10):1186-1193

(2004).