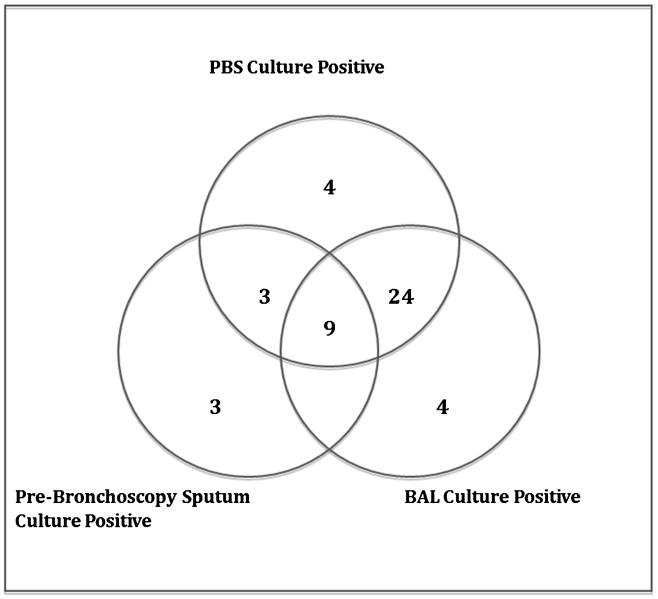
Indian subcontinent (8%). 15 patients (30%) converted to AFB sputum smear positivity post bronchoscopy and five patients (10%) were exclusively AFB sputum smear positive on PBS microscopy. *M tuberculosis* was cultured from the PBS of 40 patients (80%) and four of these (8%) were exclusively PBS culture positive (Abstract P55 Figure 1). Two of these four patients were infected with HIV.

M.Tuberculosis Culture Positive Results for Pre-bronchoscopy, BAL and PBS Samples



(PBS – Post bronchoscopy sputum, BAL – Bronchoalveolar lavage)

Abstract P55 Figure 1 M tuberculosis culture positive results for pre-bronchoscopy, BAL and PBS samples.

Conclusion Sampling sputum post bronchoscopy can provide a previously underutilized method of making a rapid diagnosis of PTB and reduce the number of patients who are treated on an empiric basis, particularly in the context of sputum smear negative or non-productive disease. Importantly it can increase culture yield by up to 8% hence allowing for a greater proportion of appropriate treatment of drug resistant strains. PBS sampling is also a key infection control measure that should be considered following bronchoscopy. Further studies are now required to establish the duration of smear positivity post bronchoscopy in patients who were previously considered non-infectious but in the light of this data, we consider it best practice to only de-isolate such patients when their infective status can be ascertained with at least one post-bronchoscopy sputum sample.

P56 HIGH INCIDENCE OF TUBERCULOSIS IN PATIENTS WITH CHRONIC KIDNEY DISEASE IN A TERTIARY REFERRAL UNIT

doi:10.1136/thx.2010.150979.7

[1]P Palchaudhuri, [1]A Riding, [1]P Begum, [2]M Ostermann, [1]H Milburn. *[1]Department of Respiratory Medicine, Guy's and St. Thomas' NHS Foundation Trust, London, UK; [2]Department of Renal Medicine, Guy's and St. Thomas' NHS Foundation Trust, London, UK*

Introduction Patients with chonic kidney disease (CKD) are at increased risk of developing tuberculosis (TB) due to immunosuppression from renal failure. There is little information on incidence of TB in CKD patients in countries such as the UK with a low background rate of TB. The incidence of TB is 14.9/100 000 population in UK and 43/100 000 population in London.[1] Our aim was to establish this incidence in our CKD patients.

Methods We identified 40 patients with CKD at a single large renal unit in London who developed TB from 1994 to 2010. Data collected included site of TB, treatment received for CKD (pre-dialysis, peritoneal dialysis (PD), haemodialysis or transplant) and outcome. Incidence of TB was calculated from total number of TB patients and total number of CKD patients in each CKD treatment group from 1994–2010.

Results Sites of TB were: 21 pulmonary, six lymph node (cervical, mediastinal and aortic lymph nodes), five disseminated/miliary, six spinal, one renal, one skin and three of unknown sites. Only three patients had a past medical history of TB. Three PD patients had TB of whom two had peritoneal TB. 18/40 CKD/TB patients were pre-dialysis, 3/40 had PD, 15/40 were on haemodialysis, 4/40 had a transplant. The incidence of TB was 398/100 000 in patients on PD, 1267/100 000 in patients on haemodialysis and 298/100 000 in renal transplant recipients. No total pre-dialysis patient numbers were available. 17/40 patients were further immunosuppressed by either HIV (five cases) or drugs (12 patients) such as prednisolone, cyclosporine, tacrolimus or mycophenolate mofetil. Most of the latter had either functioning or non-functioning transplants. All patients were cured except for one who died of an unrelated cause.

Conclusions Patients with CKD are at increased risk of developing TB compared with the general UK population. Peritoneal TB is more common in patients on PD whereas pulmonary TB is seen more often in other CKD groups followed by lymph node TB. More than two fifth of the CKD/TB patients had further immunosuppression in the form of drugs or HIV infection, thus further increasing their risk of developing TB.

REFERENCE

1. Tuberculosis Update. March 2010. www.hpa.org.uk.

P57 THE LONDON TB METRICS: ARE TARGETS ACHIEVABLE IN A LOCAL DISTRICT HOSPITAL CLINIC?

doi:10.1136/thx.2010.150979.8

L S C Lok, L Ridge, J Barrett, D J F Mack, D D Creer. *Barnet and Chase Farm Hospitals NHS Trust, Barnet, UK*

Introduction and objectives Tuberculosis (TB) has re-emerged as an important public health problem in the UK. Subsequent to the publication of 'Stopping Tuberculosis in England: An Action Plan from the Chief Medical Officer' in 2004, the London TB Metrics was produced, against which the performance of local TB services can be measured. This audit recorded relevant aspects of diagnosis and management of all adult TB patients in a local district hospital TB clinic, and compared them against the Metric targets.

Methods Eight of the nine Metric indices were selected (neonatal BCG vaccination coverage excluded). Data were collected on all adult patients seen in an outpatient TB clinic in 2008 and compared against targets set in the London TB Metrics.

Results 73 adults (35 males, 38 females) were diagnosed, of which 38 (49.4%) were pulmonary cases. 69 patients (94.5%) were offered an HIV test; 63 patients attended for testing, with two patients testing positive for HIV. Abstract P57 Table 1 summarises results achieved.

Abstract P57 Table 1 Comparison of results achieved against targets set in the London TB Metrics

Metric	Metric detail	Target	Achieved
2	Access: suspected pulmonary TB cases seen within 2 weeks of referral	≥90%	92.7%
3	Diagnosis: confirmation of pulmonary TB by liquid culture	≥65%	63.2% (70.6% excluding foreign diagnoses)
4	Diagnosis: sputum smear results available within one working day	100%	30.1% within 1 day, 61.8% within 2 days
5	Risk assessment recorded	≥90%	94.5%
6	Treatment completion rate	≥85%	84.9% (98.4% excluding transfers)
7	Contact tracing	Able to report activity and outcome	Achieved
8	Workforce	One TB nurse per 40 notifications per year	Achieved
9	HIV testing offered	≥80%	94.5%

Discussion We have audited performance of a local TB clinic against targets set in the London TB Metrics. Achieving a microbiological diagnosis in 65% is difficult as patients are often already on treatment before referred into the service. Changes were instituted in laboratory workflow patterns to improve sputum smear result availability within one working day, increasing to 93.8% in the first 2 months of 2010.

Conclusion The London TB Metrics targets are achievable (seven of eight targets met) and provide an audit tool that may facilitate improvements in the standard of TB care.

P58 WHAT DOES PULMONARY TUBERCULOSIS (TB) LOOK LIKE IN LONDON?

doi:10.1136/thx.2010.150979.9

C Brown, S Natas, A Salam, R Breen. *Guys & St Thomas' NHS Trust, London, UK*

Introduction A typical radiological presentations of TB may lead to unnecessary and costly tests, delayed or missed diagnoses, and increased transmission. Feeling that such presentations were increasing, we retrospectively reviewed our thoracic TB patients' radiology.

Methods The London TB Register (LTBR) was queried for patients at our Trust with intrathoracic lymph node or pleural disease (January 2006–December 2008), or pulmonary disease (January 2008–December 2008). Chest radiographs (CXRs) and CT scans from symptom onset to diagnosis were analysed by a consultant radiologist. Clinical data was obtained from hospital records.

Results 118 patients were identified: male=75 (64%); median age=33 years; HIV-infected=10 (8%). 118 (100%) had CXRs and 57 (48%) additional CTs. From LTBR 16 had intrathoracic lymphadenopathy, 16 pleural diseases, 73 pulmonary diseases, and three mixed. One pre-diagnosis CXR was performed in 7/10 (70%) HIV-positive and 63/108 (58%) HIV-negative/unknown; two in 3/10 (30%) HIV-positive, 27/108 (25%) HIV-negative/unknown; >3 CXR (maximum eight) were performed in 18/108 (17%) HIV-negative/unknown. We focused on radiologically pneumonic cases. 63/118 (53%) had consolidation on initial CXR, 66/118 (56%) on final. 29/66 (44%) had multifocal disease; all but 8/29 (28%) had either lymphadenopathy, cavitation, or nodules. 37/66 (56%) had disease in one zone (see Abstract P58 Table 1). 18/37 (49%) were right UZ; eight with/without pleural involvement but no other suggestive features such as cavitation or nodularity. 7/37 (19%) were left UZ patients; 4/7 (57%) with no other suggestive features. 8/37 (22%) had solely LZ consolidation; 2/8 (25%) with no other suggestive features. Of 17 presentations that could mimic standard pneumonia (zonal disease with/without pleural involvement but no suggestive TB features) one was HIV positive; 15 had sputum samples—4/15 (27%) were smear positive, 12/15 (80%) were culture positive. Progression to CT was 10/17 (59%). With any consolidation, 20/32 (63%) CTs accessible yielded additional information, often minimal (e.g. 14/32 (44%) showed nodules in addition to lymphadenopathy). 13/32 (41%) were women, 9/13 (69%) under 40-years-old.

Abstract P58 Table 1

Sole disease site	RUZ	RMZ	RLZ	LUZ	LMZ	LLZ
Total number	18	1	3	7	3	5
With pleural involvement	4	1	1	2	0	2
No other TB features	8	1	1	4	2	1
With cavitation	4	0	2	2	0	1
With nodules	0	0	0	0	0	2
With lymphadenopathy	9	1	2	0	1	2
Progressed to CT	10	2	3	4	2	1

Discussion In our cohort the majority of patients had typical diagnostic features on presenting CXR. Lower zone cases were not uncommon but most had features suggestive of TB. The high frequency of CT with questionable clinical gain and high radiation exposure, particularly in young women, is of concern.

P59 WHY DO WE OFTEN FAIL TO MEET THE GOLD STANDARD FOR THE DIAGNOSIS OF ACTIVE TUBERCULOSIS?

doi:10.1136/thx.2010.150979.10

S Huq, M Haris, M Gautam, P D O Davies. *Liverpool Heart and Chest Hospital NHS Foundation Trust, Liverpool, England*

Introduction Although laboratory culture of *Mycobacterium tuberculosis* (M TB) remains the gold standard for the diagnosis of active tuberculosis (TB), only 66% of pulmonary and 46% of extra-pulmonary cases of TB in the UK are culture confirmed.[1] The Health Protection Agency's Strategic Plan aims for at least 70% of pulmonary TB cases to be confirmed by positive culture. The aim of this study was to identify the reasons for not obtaining culture confirmation in a cohort of active TB patients.

Methods A retrospective study of all patients with active tuberculosis in a TB centre between January and December 2009.

Results 69 patients (46 male) with a mean age of 42 years (range 3–83) were diagnosed. 36 (52%) had pulmonary TB with or without extra-pulmonary disease and 33 (48%) had extra-pulmonary TB only. 29 (81%) cases of pulmonary TB were culture positive and 4 (11%) had no growth on culture. 3 (8%) cases had no sample obtained. These were all children aged 3–5 years who had a positive Mantoux test, evidence of TB on chest radiograph and a history of close contact. 17 (52%) cases of extra-pulmonary TB were culture positive. 10 (30%) had samples taken but no growth on culture. 2 (6%) had samples obtained but not sent for culture while 4 (12%) had no sample obtained.

Conclusion The commonest reason for not obtaining culture confirmation was a negative growth (20%). Failure to obtain a microbiological sample (10%) and failure to send the collected sample for mycobacterial culture (3%) were the other reasons. A positive culture of M TB is important because it not only confirms the diagnosis but also provides the drug susceptibility profile of the organism. Our finding that the largest proportion of cases not confirmed by positive culture was due to no growth from a specimen suggests that the current microbiological methods for growing M TB may be inadequate and further research is needed to increase the diagnostic yield. Secondly, there is a need to educate