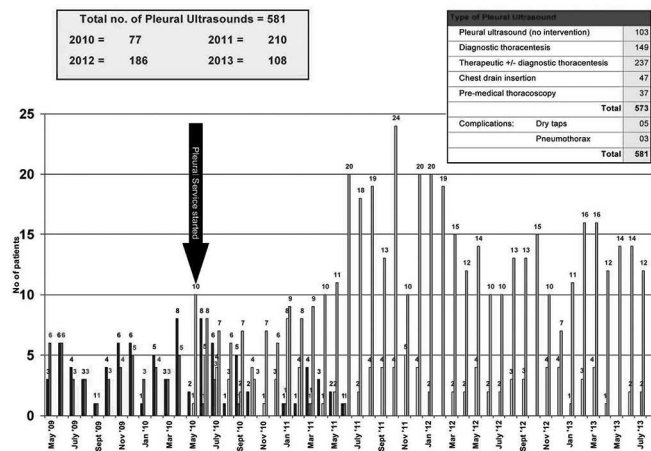


26% diagnostic, 18% ultrasound only with no intervention, and 14% pre chest drain insertion or thoracoscopy. "X" marks the spot are now obsolete.

Conclusions Pleural ultrasound has gradually but surely become an essential component of the Respiratory specialist's remit. An inpatient pleural service enables prompt assessment and diagnosis, relief of symptoms and onward management as appropriate. With an ambulatory pleural service, patients with either known malignant pleural effusion or first presentation can be managed as elective daycase procedures without attending A&E or being admitted. Once symptoms are relieved patients are able to go home knowing how to access the Service if the fluid recurs without a crisis admission via A&E. Moreover, unnecessary invasive pleural interventions can be avoided and definitive management expedited.



Abstract P220 Figure 1.

Though requiring appropriate work planning and resources it does result in substantial qualitative and quantitative improvements in patient care. No doubt, not all pleural effusions need be aspirated under ultrasound guidance, however, this is not an exact science and not infrequently, with the aid of pleural ultrasound, an invasive pleural intervention may be avoided altogether.

P221 IMPROVED MANAGEMENT OF PLEURAL EFFUSION IN A DISTRICT GENERAL HOSPITAL

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10.1136/thoraxjnl-2013-204457.373

Background Exudative pleural effusion (EPE) is a common presenting problem, associated with serious underlying pathology warranting expeditious and thorough investigation. The BTS guideline outlines a diagnostic algorithm and recommends referral of patients to chest physicians following inconclusive initial pleural fluid analysis.

We have carried out a series of audits on the management of EPE in a district general hospital (DGH). The first revealed deficiencies in the diagnostic pathway, with low diagnostic rates compared with published data. We instituted regular teaching sessions including simulated training of junior doctors, established a specialist pleural effusion clinic (SPEC) and during the same period there was increase in the number of respiratory registrars. In a previous study comparing results of the first retrospective audit cohort (RC) to the SPEC cohort showed

improved outcomes in the latter. Unfortunately a significant proportion of patients with EPE are still diagnosed on acute admission. In this audit we compare the management of these patients to the RC.

Methods We carried out a retrospective re-audit (RA), against BTS guidelines, of non-elective admissions to the general medical take from January to December 2011 with EPE. Clinical records of patients with pleural effusion were reviewed and analysed for investigations, involvement of respiratory physician, length of stay and outcome. Those with transudate effusions were excluded. This was similar to the RC which covered the period from February 2005 to June 2006. We present comparative results.

Results Of 106 patients, 66 patients had diagnostic aspiration, 18 had small effusions unable to aspirate, 19 had known diagnoses and 3 had terminal cancer. The respective results in the RA compared to the RC showed that mean age was 65 vs 68 years, 86% had all the recommended tests vs 46%, 87% had chest physician input vs 50% and diagnosis confirmed in 95% vs 58%. The median length of stay in hospital was 4 days (range 0–51) vs 12 days (range 1–55). Table 1 demonstrates pleural fluid tests performed.

Conclusions The RA shows improved investigation, access to chest physician, diagnostic rates and average length of hospital stay in patients with EPE in this DGH. The change is likely multifactorial owing to increasing awareness, training, and better specialist services.

Abstract P221 Table 1. Pleural fluid investigations

Test on pleural fluid	RC (% of samples sent)	Re-audit (% of sample sent)
Protein	91%	97%
LDH	91%	94%
pH	55%	94%
MCS/ AFB	85%	100%
Cytology	82%	95%

P222 PLEURAL TB: A COMMON CAUSE OF PLEURAL EFFUSION IN SOUTH LONDON

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Background Pleural tuberculosis (TB) is one of the most common forms of extrapulmonary TB, reported to account for up to 25% of TB infected adults, and 30% of exudative pleural effusions in developing countries. Despite this, little information has been reported on its incidence within London.

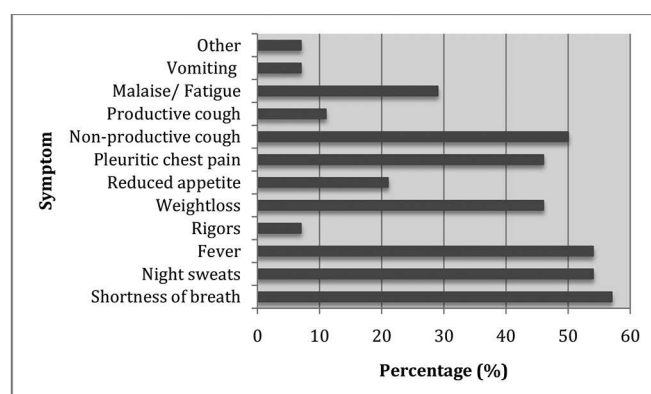
Aims and methods A retrospective observational study was performed at a London tertiary referral centre. The aim was to identify the contribution of pleural TB to the overall burden of both pleural and TB disease, and assess diagnostic yields of investigation techniques and outcomes of treatment.

Results 28 patients were diagnosed with pleural TB between Jan 1st 2010- 31st Dec 2012. This represented 6.2% of the total number of TB cases, and 4% of the total number of investigated pleural disease cases. The mean age of the patients was 33 ± 10 (range 17–62); 79% were male; 46% were Black African, 29% Asian, 21% Caucasian and 4% Black Caribbean. There was a range of symptoms at presentation, with 96% of patients complaining of at least one symptom (Figure 1).

Diagnostic yields were as follows; sputum smear 3% and culture 18%; pleural fluid smear 0 and culture 36%; pleural biopsy smear 11% and culture 54%; pleural biopsy histology 93%. Culture yield for pleural fluid and biopsy was 61%, and overall culture yield for sputum, pleural fluid and biopsy was 68%.

All patients' received quadruple TB therapy, with 82% of patients being given the standard six-month therapy. 92% showed an excellent radiological response, with the x-ray being normal, or with only minor residual abnormalities. To the present date, there has been no diagnosed recurrence of TB.

Conclusions Pleural TB contributes significantly to the overall burden of pleural disease in this London hospital. TB should be considered in patients presenting with pleural disease, especially young patients from ethnic minority backgrounds. To improve the diagnosis and treatment of pleural TB, culture yields need improvement.



Abstract P222 Figure 1. Percentage of patients presenting with various symptoms.

P223 MEDICAL THORACOSCOPY - PATIENT EXPERIENCE OF ADVANCED NURSE PRACTITIONER- PROVIDED CONSCIOUS SEDATION

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Medical thoracoscopy (MT) is a safe procedure provided by respiratory physicians across the UK. The conscious sedation is administered by staff with a variable level of training.

Aim To assess a simple patient comfort score at MT when conscious sedation (CS) was provided by an advanced nurse practitioner (ANP) compared to others (senior nurse, endoscopy nurse or junior doctor).

Methods A patient comfort score is recorded routinely as part of our thoracoscopy service immediately after the procedure once the patient is awake in recovery. The ANP is an ALS provider with senior experience in critical care. Intraoperative administration of midazolam for sedation and alfentanil for pain control pre-biopsies was undertaken by a dosing schedule determined by the level of sedation assessed by the ANP who also monitored the patient during the procedure. When CS was given by others midazolam was administered in an initial bolus followed by boluses as indicated by the thoracoscopist in keeping with information by the monitoring nurse on the level of sedation or discomfort. Patient comfort score was evaluated using a 5 point scale within 30 minutes of return to the recovery area. The CS was administered either by the ANP or others in keeping

with their availability on the day; no randomisation was performed. The analysis used SPSS programme.

Results 50 consecutive patients undergoing thoracoscopy were included. 27 had CS by ANP (group 1) and 23 by others (group 2). Overall the procedure was well tolerated. Patient comfort score was better in group 1 (mean, SD 0.59 +/- 0.8) vs. group 2 (1.63 +/- 1.3), $p < 0.05$. This was achieved with a larger dose of midazolam in group 1 (2.87 +/- 1.12 mg) vs. group 2 (2.30 +/- 0.70 mg), $p < 0.05$ and smaller dose of alfentanil (0.245 +/- 0.14 mg) in group 1 vs. group 2 (0.527 +/- 0.25 mg), $p < 0.01$.

Conclusions conscious sedation for medical thoracoscopy when provided by a critical care experienced ANP resulted in an improved patient experience of the procedure and this was achieved through and adequate use of midazolam and lesser doses of alfentanil; this was cost-saving since the ANP also monitored the patient. Retaining of trained staff is essential for this specialised service.

Inhaled therapy in COPD

P224 EVALUATION OF INHALED CORTICOSTEROID RELATED PNEUMONIA MORTALITY IN PATIENTS WITH COPD WHO WOULD NOT FIT THE CRITERIA FOR INCLUSION IN RANDOMISED CONTROLLED TRIALS

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10.1136/thoraxjnl-2013-204457.376

Background Large randomised controlled trials such as TORCH (towards a revolution in chronic obstructive pulmonary disease (COPD) health) report an increased risk of pneumonia associated with use of inhaled corticosteroids (ICS) in COPD but no corresponding increase in pneumonia-related mortality. However, these trials exclude patients who are elderly, comorbid, have co-existing lung conditions or use long-term oxygen therapy and may not be representative of 'real-world' practice. We hypothesised that ICS use in patients that are ineligible for TORCH would be associated with increased risk of pneumonia hospitalisations and mortality.

Methods We carried out an analysis of 2 independent cohorts. The EXODUS cohort included patients admitted with COPD exacerbation and considered outcomes over 1 year including pneumonia hospitalisations and pneumonia-related mortality. The Edinburgh pneumonia study included patients hospitalised with community-acquired pneumonia with the primary outcome of 30-day mortality. A secondary analysis of patients from this cohort with spirometry-confirmed COPD during clinical stability was conducted.

Results There were 977 patients included from the EXODUS cohort. 106 patients (10.8%) were hospitalised for pneumonia and 18 patients (1.8%) had pneumonia-related mortality within 12 months of initial admission. 497 patients (50.9%) would have been ineligible for the TORCH study. In a Cox proportional hazards model, adjusting for relevant confounders, patients who were ineligible for TORCH had an increased risk of pneumonia hospitalisation (HR 1.60; 95% CI 1.04–2.45) and an increased risk of pneumonia-related mortality (HR 6.1; 95% CI 1.7–22.0). Figure 1 shows a cox adjusted survival curve for