to undertake the tests but 5 (5%) were not. 92 participants (74%) were current drivers and 84 (91%) read the DVLA leaflet. Only 10 of these (12%) thought they might have a disorder that could impact on their driving abilities although 38 (45%) were concerned they might not be allowed to drive in future. However, only 4 (5%) were discouraged to undertake the tests because of this. Overall, most patients (80%) found these leaflets informative and easy to understand.

Conclusions These leaflets appear to improve patients' understanding of OSAHS and its implications, particularly regarding driving. Although they can engender concern and anxiety among some, the majority of patients felt motivated to undertake the tests. Improving the level of patient education and awareness through such leaflets may positively influence their involvement in overall management, potentially improving compliance and outcomes in the long term.

Thinking outside the lung: improving the safety of pleural procedures

P29 SECURING AN INTERCOSTAL CHEST DRAIN WITHOUT SUTURES

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Introduction and Objectives Securing an intercostal chest drain with sutures after insertion is an important step. Purse string sutures should not be used as it converts a linear incision to a circular, unsightly scar, during the healing process. Two mattress sutures are used—the first suture is to assist the latter closure of the wound after drain removal and the second a stay suture, to secure the drain. In an emergency situation and in the paediatric population, the technique is cumbersome. A novel chest drain is described where the chest drain is secured without sutures.

Method The novel idea involves securing a chest drain without sutures, with the help of two inflatable balloons (cuffs). An inner (I) and an outer (O) inflatable cuff, with a one way valve to inject air, prevents the chest drain from dislodgement. The risk of infection will be lower as the two inflatable cuffs and the intercostal muscles around the chest drain will provide a perfect fit. The chest drain is removed after deflating the balloons (cuffs) at the end of inspiration. Small gauge chest drains do not require a suture and the linear incision can be closed by suture strips, after removal of the chest drain. The novel chest drain is especially useful in patients with pneumothorax and in the paediatric population, providing a snug, secure and a stable position of the chest drain.

Conclusion The above chest drain provides a suture less method to secure an intercostal chest drain. It is especially useful in an emergency situation (tension pneumothorax) and in the paediatric population.

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P30 WHAT DIFFERENCE DOES BEDSIDE ULTRASOUND GUIDANCE MAKE TO PLEURAL FLUID ASPIRATION AND DRAINAGE IN A DISTRICT GENERAL HOSPITAL SETTING?

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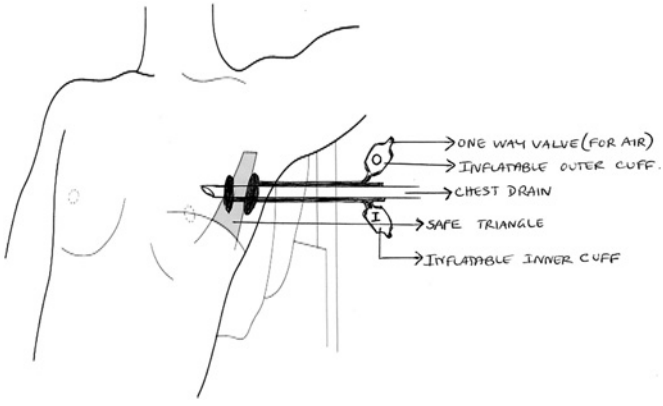
Background British Thoracic Society guidelines strongly recommend thoracic ultrasound prior to all pleural procedures for pleural fluid. Previous studies have shown lower rates of failure and pneumothorax following the use of chest ultrasonography prior to pleural procedures.

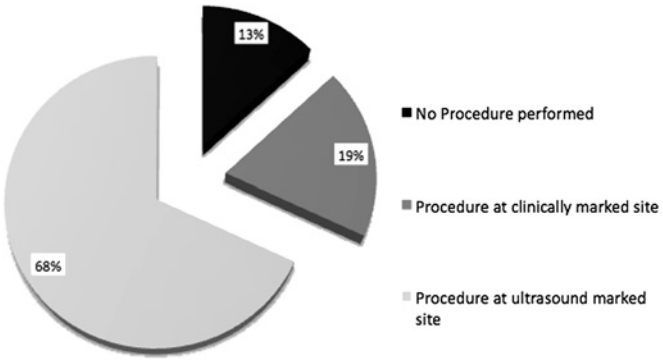
Aim We have set out to identify, in a district general hospital environment, the effect of pleural ultrasound on selection of sites for pleural procedures, the change in operator's confidence associated with those procedures and the reasons for changes in site selection.

Methods 47 patients with suspected pleural effusions had an aspiration or drainage site marked based on clinical findings, chest radiography and CT scan. Sites were then marked after bedside thoracic ultrasound examination by a member of the respiratory team (Level 1 competence). The level of confidence associated with obtaining fluid safely was assessed both before and after ultrasound on a visual analogue scale. The distance between sites marked before and after ultrasound and whether the procedure performed was the same as originally planned were also recorded.

Results Following thoracic ultrasound no procedure was considered safe in 13% (6/47). A procedure was carried out in 87% (41/47). In 78% of these (32/41), the preferred site was changed after ultrasound. The reasons were greater fluid depth in 69% (22/32), an anticipated greater yield during therapeutic aspiration in 16% (5/32) and the initial site not being safe in 16% (5/32). Sites marked prior to ultrasound were considered unsafe in 23% (11/47) due to risk of pneumothorax in 15% (7/47) or the clinically marked site being below the diaphragm in 9% (4/47). Bedside chest ultrasound increased the confidence associated with pleural procedures. The confidence after ultrasound of the performed procedure was increased by 1.09 (95% CI 0.85–1.34) on the 5-point visual analogue scale.



Abstract P29 Figure 1



Abstract P30 Figure 1 Changes to intended procedure after thoracic ultrasound.

Conclusions Bedside chest ultrasound prior to pleural procedures in this cohort resulted in a change in the preferred site in a considerable number of patients. Ultrasound increased the level of confidence with the selected pleural procedures and resulted in a change to the intended procedure in 23% (11/47) of cases which included completely abandoning the procedure in 12.7% of cases (6/47).

P31 ROUTINE ANALYSIS OF PLEURAL ASPIRATES FOR AFB IN PATIENTS WITH PLEURAL EFFUSION OF UNKNOWN CAUSE IS OF LIMITED USE

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The investigation of pleural effusion of unknown cause may include analysis of pleural aspirate for presence of acid-fast bacilli (AFB) by smear and culture. We reviewed data on all pleural aspirates sent for AFB analysis over 11 years (January 2000 to December 2010) to identify the diagnostic yield of pleural aspirate AFB smear and culture in our hospital where there is a low incidence of tuberculosis (TB). Data were crosschecked with the TB notification list obtained from the Consultant in Communicable Disease Control (CCDC) to ensure identification of all tuberculous effusions. A list of all AFB positive specimens (including smears, cultures and histology) was also obtained from the pathology laboratory. The medical records of patients with AFB positive aspirates were reviewed. We also reviewed the medical records of patients with AFB negative pleural effusion who were diagnosed to have TB by other means. In total, 960 pleural aspirate samples were sent for AFB analysis. None of these were smear positive and only 13 (1.4%) were found to be positive on cultures. The ethnic breakdown of this figure was one, five, and seven cases for Asian, Caucasian, and Afro-Caribbean patients, respectively. Five of these patients were known or found to be HIV positive, all of whom were Afro-Caribbean. Eight of the 13 patients with positive pleural aspirate cultures underwent pleural biopsy (three by thoracoscopy), all of which confirmed a diagnosis of TB. One patient with positive cultures of pleural aspirate also had TB confirmed on culture of bronchial washings. A further ten patients (1%) whose pleural aspirates were AFB negative on smear and culture were diagnosed with tuberculosis by other means. The yield of AFB analysis on pleural aspirate is very low. Its role in commencing treatment in those who ultimately are diagnosed to have tuberculosis is limited. Risk factors for tuberculosis need to be considered before sending aspirate for AFB analysis. Where risk of TB is considered to be significant, pleural fluid aspiration should be combined with simultaneous pleural biopsy, as the latter may provide crucial diagnostic information at an earlier stage.

P32 ARE JUNIOR DOCTORS SAFE TO PERFORM PLEURAL PROCEDURES? AN AUDIT OF JUNIOR DOCTOR KNOWLEDGE AND COMPETENCY OF PLEURAL PROCEDURES BEFORE AND AFTER DEDICATED LECTURE-BASED AND PRACTICAL TEACHING SESSIONS

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Introduction Pleural procedures are considered core competencies at the end of ST2 medical training but with the advent of subspecialisation within medicine and reduced working hours, junior doctors may have less exposure to these procedures.

Aims and Objectives One of the major themes that arose from the 2008 Rapid Response Report was inexperienced doctors undertaking procedures. We sought to determine the level of knowledge and competency at pleural procedures of junior doctors (F1-ST2) before and after teaching sessions to assess whether improvement occurred.

Methods Junior doctors were asked to complete a questionnaire in early 2011 about their self-assessed level of competency at pleural procedures and testing knowledge on various aspects of chest drain insertion and removal. A series of lectures at "mandatory" teaching days and optional practical drain insertion sessions on animal cadavers were delivered and junior doctors were asked to repeat the questionnaire between June and July 2011.

Results 57 doctors filled in the questionnaire pre-teaching and 37 completed in after teaching. Please see Abstract P32 table 1 for results. On re-audit, some of the most concerning findings were that 1 out of the 5 ST2 trainees had performed <3 thoracocentesis and 3 out of the 5 had performed <3 Seldinger chest drain insertion (1 never performed procedure) just prior to the completion of their ST2 rotation.

Abstract P32 Table 1 Table showing results of pleural audit before and after teaching

	Pre-teaching	Post-teaching
Number completing survey	57 doctors (53% foundation, 47% ST1/2)	37 doctors (35% foundation, 36% ST1/2, 27% unknown)
Number (and %) self-judged to be competent at thoracocentesis	22 (39% of total) Of these 14 (25% of total) performed procedure >3 times	16 (43% of total) Of these 13 (35% of total) performed procedure >3 times
Number (and %) self-judged to be competent at Seldinger drain insertion	15 (26% of total) Of these 5 (9% of total) performed procedure >3 times	12 (32% of total) Of these 8 (22% of total) performed procedure >3 times
Number (and %) self-judged to be competent at large bore drain insertion	5 (9% of total) Of these 1 (2% of total) performed procedure >3 times	6 (16% of total) Of these 3 (8% of total) performed procedure >3 times
Percentage who would obtain written consent for plural procedures	56%	73%
Percentage correctly identifying triangle of safety	61%	86%
Percentage correctly identifying area for emergency decompression of tension pneumothorax	70%	75%
Percentage choosing large bore venflon for tension pneumothorax decompression	31% (grey and orange)	32% (grey and orange)
Percentage who would remove a bubbling chest drain	10.6%	5%

Conclusion Dedicated teaching covering all aspects tested in the questionnaire led to an improvement in theoretical knowledge about pleural procedures but worrying basic deficiencies remain. It is uncertain whether the trainees had not attended teaching or had not absorbed the information. In addition junior doctors still perform relatively few pleural procedures. Of particular concern, some ST2s who are shortly to be medical SpRs have performed very few pleural procedures which are part of their core competency. Whether this is