P26 THE UK PAEDIATRIC SLEEP VIDEOCONFERENCING CIRCUIT: FROM IDEA TO REALITY!

doi:10.1136/thoraxjnl-2011-201054c.26

[1]D S Urquhart, [2]D Kilner. *[1]Royal Hospital for Sick Children, Edinburgh, UK; [2]Great Ormond Street Hospital for Children, London, UK*

Background Paediatric sleep medicine is an expanding area of clinical practice. A recent report[1] highlighted the heterogeneity in both service provision and training between UK paediatric sleep centres. It was felt that a forum for regular peer review and discussion of cases, as well as "hot topics" in paediatric sleep was lacking, and to this end a UK paediatric sleep videoconferencing (VC) network was proposed. The Australasian and Pacific paediatric sleep centres (Australia, New Zealand and Singapore) have been conversing monthly using a VC network since 2001, and our group was modelled on their experience.

Aims We aimed to set up a multicentre sleep VC network of all interested parties working in the field of UK paediatric sleep medicine.

Methods We canvassed all interested nurses, nurse specialists, respiratory/sleep physiologists, EEG technicians, and paediatricians working in the field of paediatric sleep medicine and its' related disciplines via group emails using the mailing list of the British Paediatric Respiratory Society, and by posting information on the British Sleep Society website and in its' December 2009 newsletter. International videoconferencing is facilitated via the NHS Grampian tele-medicine bridge, based in Aberdeen.

Results To date, a total of 75 individuals, representing 31 UK and four overseas centres have expressed an interest in the network and make up our mailing list. An initial test conference was held in February 2010 between Edinburgh and Great Ormond Street Hospitals, since when a total of 6 meetings at 3-monthly intervals have been held. The meetings have each hosted a median (range) of 9 (5–16) centres participating, with 21 paediatric sleep centres taking part in at least 1 meeting.

Topics covered have included:

- A workshop on technical and scoring issues.
- Case discussions of central and obstructive sleep disorders, behavioural sleep problems, as well as difficult to manage respiratory failure.
- Research presentations.
- Feedback from international sleep conferences.
- Presentations on aspects of quality assurance and sleep database management.

Summary The paediatric sleep videoconference is a forum which has allowed peer review and discussion of scoring rules, technical issues, and difficult cases within the field of paediatric sleep medicine. Furthermore, it has proved an opportunity to present research or research proposals to like-minded doctors, nurses and scientists.

REFERENCE

1. **Primhak R,** *et al*. Royal College of Paediatrics and Child Health Working Party on Sleep Physiology and Respiratory Control Disorders in Childhood. *RCPCH*, 2009.

P27 UNDERGRADUATE SLEEP MEDICINE TEACHING IN UK MEDICAL SCHOOLS: A QUESTIONNAIRE SURVEY

doi:10.1136/thoraxjnl-2011-201054c.27

[1]D S Urquhart, [1]J Orme, [2]S Suresh. *[1]Royal Hospital for Sick Children, Edinburgh, UK; [2]Mater Children's Hospital, Brisbane, Australia*

Background A 1993 survey reported that US medical schools devoted an average of 2 h to undergraduate teaching of sleep and 7% universities had no structured sleep teaching whatsoever.[1] Since 1993, sleep has become increasingly recognised as having a key role in human disease and child development. For example, obstructive sleep apnoea (OSA) has, in the last 10 years become recognised as a major cause of hypertension, while untreated childhood OSA has been shown to have a detrimental effect on cognition and behaviour.

Methods We aimed to assess whether such clinical knowledge breakthroughs had led to an increase in undergraduate sleep teaching. The questionnaire used for the 1993 US survey[1] was adapted for UK use, and distributed via email to the undergraduate deans of all UK medical schools (n=30). Email (x2) and postal reminders were sent.

Results Responses were received from 17/30 (57%) medical schools, including two that refused to provide information. Data were compiled on the remaining 15 responses. A median (IQR) of 2.5 (1, 4.3) hours is spent teaching sleep medicine and physiology, while two universities (13%) offer no sleep teaching whatsoever. Elective learning modules in sleep are available in 4/15 (27%) medical schools. Areas covered include pharmacology (80%), pathophysiology (73%), diagnostic evaluation (66%), daytime somnolence (47%), developmental aspects of sleep (40%), paediatric sleep (40%), and polysomnography (33%). Teaching was delivered by lectures (87%), and small group tutorials (40%) with only one university utilising online teaching modules. Teachers are a mixture of medical staff (87%), physiologists (33%) and sleep scientists (7%). Only four universities (27%) formally assess sleep knowledge. Barriers to teaching were time (47%), and lack of qualified faculty (13%).

Conclusions In spite of increasing evidence that sleep plays a key role in human health and behaviour, there is a paucity of undergraduate teaching in sleep at UK medical schools, with some universities reporting no sleep teaching at all. In particular it appears that online learning is an under utilised teaching modality, and one which might overcome the lack of faculty and teaching time as barriers to teaching.

REFERENCE

1. **Rosen RC,** *et al*. *Sleep* 1993;**16**:249–54.

P28 THE IMPACT OF PATIENT INFORMATION LEAFLETS IN SLEEP CLINIC

doi:10.1136/thoraxjnl-2011-201054c.28

S Huq, D Price, S Sureshkumar, S Kalidindi, M Walshaw, J Hadcroft. *Liverpool Heart and Chest Hospital NHS Foundation Trust, Liverpool, UK*

Background Sleep apnoea can result in traffic accidents, and the British Lung Foundation's (BLF) "Snoring and Sleep Apnoea" and the Driver and Vehicle Licensing Agency's (DVLA) "Think! Tiredness can kill" leaflets are commonly used to inform patients about this. We wished to assess the impact of such knowledge on the general understanding and motivation of patients undergoing formal assessment for sleep apnoea in a sleep clinic.

Methods In a prospective survey, patients were provided with the above leaflets when they underwent the sleep study, and completed a structured questionnaire when attending the results clinic several weeks later.

Results 125 consecutive patients (92 male) with a mean (SD) age of 51 (14) years, BMI of 33.6 (6.9) and Epworth Sleepiness Scale of 10 (6) completed the questionnaire. 51 (41%) were eventually diagnosed with significant obstructive sleep apnoea/hypopnoea syndrome (OSAHS) requiring referral for continuous positive airway pressure therapy. 105 patients (84%) read the BLF leaflet and 91 (87%) assumed they understood about sleep apnoea from it. 28 (27%) believed they had sleep apnoea, 26 (25%) believed they did not, while the remainder (48%) were unsure. Although 28 (27%) became more worried about themselves, 56 (53%) were more keen

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

doi:10.1136/thoraxjnl-2011-201054c.29

S Kesavan, G D Angelini. *Bristol Heart Institute/University of Bristol, Bristol, UK*

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.

REFERENCE

1. **Laws D,** Neville E, Duffy J. BTS guidelines for the insertion of a chest drain. *Thorax* 2003;**58**:ii53–9.

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

doi:10.1136/thoraxjnl-2011-201054c.30

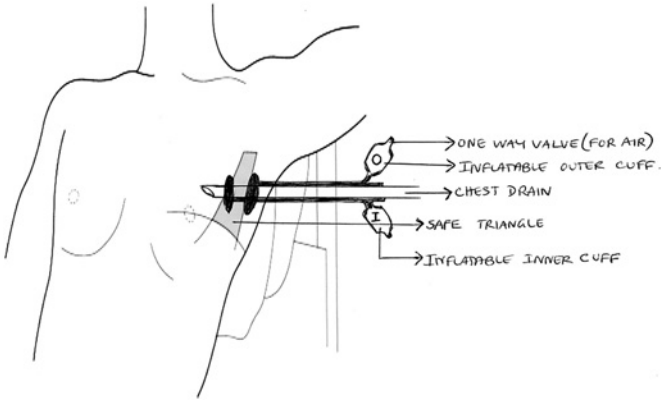
[1]O J Bintcliffe, [2]H Al-Najjar, [1]R K Sinha. *[1]Yeovil District Hospital, Yeovil, UK; [2]Royal United Hospital Bath, Bath, UK*

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.

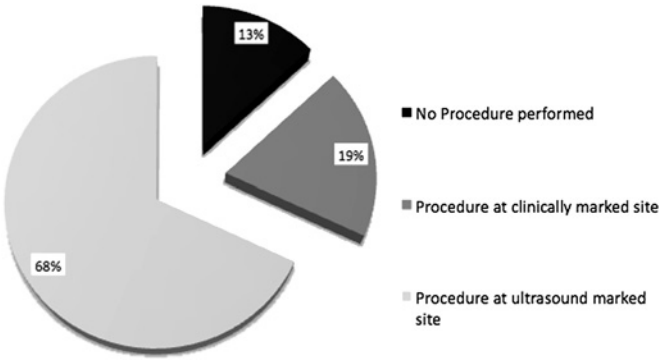
Aim We have set out to identify, in a district general hospital environment, the effect of pleural ultrasound on selection of sites for pleural procedures, the change in operator's confidence associated with those procedures and the reasons for changes in site selection.

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.