

**Discussion** US-FNAC is well tolerated and can be safely performed opportunistically by respiratory physicians during outpatient visits. The diagnostic yield is high and comparable with previous published series. Its incorporation into the lung cancer pathway can facilitate prompt diagnosis and staging without more invasive investigations.

#### REFERENCE

1. Fultz PJ, Feins RH, Strang JG *et al.* Detection and diagnosis of nonpalpable supraclavicular lymph nodes in lung cancer at CT and US. *Radiology* 2002;222:245–51.

#### M14 ROLE OF ENDOBRONCHIAL ULTRASOUND-GUIDED TRANSBRONCHIAL NEEDLE ASPIRATION IN DIAGNOSIS OF ISOLATED MEDIASTINAL LYMPHADENOPATHY (IML)

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10.1136/thoraxjnl-2013-204457.424

**Introduction and Objectives** The recognition of endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) as an important diagnostic modality has been increasing in recent years, particularly following establishment of its use in lung cancer. Mediastinoscopy is considered as the gold-standard investigation for isolated mediastinal lymphadenopathy (IML), despite the invasiveness of the procedure and need for general anaesthesia.

We present a retrospective clinical data in a large tertiary centre for respiratory medicine to evaluate the role of EBUS-TBNA in establishing a diagnosis of IML and therefore avoiding more invasive techniques such as mediastinoscopy.

**Methods** Retrospective analysis identified 249 patients undergoing EBUS-TBNA between August 2009 and July 2013, of whom 72 were found to have IML. All patients had CT or PET-CT prior to undergoing EBUS-TBNA. In patients where EBUS-TBNA failed to produce diagnosis, they received clinical and radiological follow up for upto 6 to 12 months or were considered for mediastinoscopy as per clinical needs.

**Results** Of the 72 patients, 50 were male and 22 were female. For all patients, histological diagnosis was unknown prior to EBUS-TBNA. Confirmed pathological diagnosis was gained in total of 27 patients including 17 cases of sarcoidosis, 8 cases of

malignancies, 1 case of tuberculosis and 1 case of ectopic thyroid tissue. Of the 8 confirmed malignancies 2 were adenocarcinoma, 2 were non-small cell carcinoma, 1 was squamous cell carcinoma, 1 was metastatic prostate carcinoma, 1 was metastatic breast carcinoma and 1 was Chronic Lymphoid Leukaemia (CLL). No diagnosis was achieved in 40 patients while sample was insufficient in 3 cases and 2 were false negative (bronchoalveolar carcinoma and sarcoidosis). In all 72 patients, no significant complications were reported. Of the 40 undiagnosed cases, 29 patients were followed up clinically and radiologically and discharged as appropriate while remaining 11 are still under follow up. No patient has been referred for mediastinoscopy.

**Conclusions** Already established as a safe and minimally-invasive diagnostic technique in pulmonary medicine, EBUS-TBNA provides an alternative for diagnosis of patients presenting with IML. The increasingly successful use of EBUS-TBNA in place of mediastinoscopy and CT-guided biopsy undoubtedly merits further attention in the consideration of investigation of mediastinal lymphadenopathy.

#### M15 NEBULISED BRONCHODILATORS PRE-BRONCHOSCOPY IN PATIENTS WITH OBSTRUCTIVE LUNG DISEASE: DOES IT HELP?

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10.1136/thoraxjnl-2013-204457.425

**Background** Patients with Chronic obstructive pulmonary disease (COPD) and asthma may be at higher risk of complications during bronchoscopy. Previous guidelines have recommended that all patients with asthma receive nebulised bronchodilators pre procedure. At our research centre, we changed our practice in January 2012; since this date we administer nebulised salbutamol to all patients with COPD and asthma pre-bronchoscopy.

**Aims** We examined research bronchoscopy records from asthma and COPD patients with and without nebulised bronchodilators to determine tolerance of procedure, complications and adverse events, sedation used and success of obtaining samples. We have also examined the overall safety of research bronchoscopies.

**Abstract M15 Table 1. Summary of patient demographics, tolerance and saline inserted for BAL.**

	COPD		P value	Asthma		P value
	No Pre-Procedure Neb (n=38)	Pre-Procedure Neb (n=37)		No Pre-Procedure Neb (n=32)	Pre-Procedure Neb (n=33)	
Sex (M/F)	22/16	26/11		20/12	18/15	
Age (yrs)	63.2 (5.7)	63.0 (6.1)	ns	44.3 (12.9)	40.8 (10.8)	ns
Pack Yrs*	39.9 (10.2 - 82.8)	42.0 (14.5 - 98.8)	ns			
ACQ*				1.3 (0.1 - 3.0)	1.4 (0.3 - 4.6)	ns
FEV1 (L)	1.7 (0.4)	1.9 (0.5)	0.07	2.9 (1.0)	2.7 (0.8)	ns
FEV1 (%)	61.3 (13.5)	63.7 (11.1)	ns	83.7 (20.4)	80.7 (20.4)	ns
Poor Tolerance	7.9%	10.8%	ns	6.3%	9.1%	ns
BAL (ml)*	480.0 (240.0 - 480.0)	420.0 (0.0 - 480.0)	0.06	480.0 (0.0 - 480.0)	480.0 (0.0 - 480.0)	ns

\*denotes median (range)

**Methods** A retrospective analysis of case report forms of 140 (65 asthma and 75 COPD) patients who underwent research bronchoscopy at our centre since November 2010.

**Results** See Table 1 for details.

Baseline characteristics were the same among COPD and asthma patients who did and did not receive bronchodilators. There was no significant change in procedure tolerance, sedation used, complications or adverse events and samples obtained in patients who received pre-procedure bronchodilators. Mean volume of saline inserted for BAL during bronchoscopy was  $414.3 \pm 140.5$  ml for asthmatics and  $392.1 \pm 123.5$  ml for COPD patients.

Overall, serious complications were rare: 2 patients bled during the procedure requiring cold saline and adrenaline, 1 was observed for a few hours due to low saturations, 1 was admitted overnight for hypotension and 1 was admitted with pleuritic chest pain.

41 patients were symptom free at 24 hours and 85 were symptom free at 7 days. The most common mild symptom reported at 24 hours was sore throat, being reported by 50 patients; at 7 days 21 patients reported cough.

**Conclusion** Nebulised bronchodilators pre-bronchoscopy in patients with asthma or COPD appears to have little impact. Overall, research bronchoscopy with significant BAL in these patients appears relatively safe.

\* The first 2 authors contributed equally to this work.

#### M16 STAFF-PATIENT PERCEPTION OF DISCOMFORT WITH FIBRE-OPTIC BRONCHOSCOPY-IS THERE A CORRELATION?

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10.1136/thoraxjnl-2013-204457.426

**Introduction** Patient comfort and safety are crucial aspects of fiberoptic bronchoscopy. This is usually performed under sedation and at times it is tricky to judge the degree of sedation and patient comfort during the procedure.

**Methods** We conducted a prospective survey to assess patients' satisfaction with sedation and the overall experience during flexible bronchoscopy. This was a questionnaire based survey, wherein the patients' completed a questionnaire within 48 hours after the procedure. We advised them not to complete the questionnaire on the same day of the procedure to avoid bias due to the effects of sedatives used during procedure. The questions were scored on a 5-point Likert scale. The questionnaire included satisfaction regarding the procedure, staff professionalism, the endoscopy suite, perception of adequacy of sedation, technical ability of the interventionalist, and post procedure care. Nursing staff were requested to record their perception of the degree of sedation and patient discomfort. Correlation between patients perception of discomfort/pain were compared with the staff perception.

**Results** 52 patients completed the questionnaire over a 3 month period. 33/52 (63.7%) experienced pain/discomfort during the procedure. 73.1% felt sufficient steps were taken to reduce the pain/discomfort. 46 (88.4%) of patients' disclosed that they did not mind to have a repeat procedure if needed. While there was poor correlation between the protocol of sedation used and patient comfort, there was a significant correlation between the staff perception of adequacy of sedation with the patients perception ( $p = 0.0007$ ).

**Conclusion** Regular patient surveys would give us an idea about the sedation practices we employ for bronchoscopy. As staffs perception significantly correlates with patients' pain/discomfort this can be a valuable tool in judging the sedation requirements especially in a partly sedated patient.

#### M17 SURVEY ASSESSING METHODS OF VOCAL CORD ANAESTHESIA DURING BRONCHOSCOPY

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10.1136/thoraxjnl-2013-204457.427

**Introduction** To anaesthetise the vocal cords during bronchoscopy there are 2 methods in general use, transcriceid lidocaine or lidocaine administered directly through the bronchoscope (direct vision). The choice between the two methods is down to individual operator choice and there has been little work comparing each method. We performed a survey assessing several aspects of bronchoscopy to see if there was a difference between the 2 approaches.

**Methods** The bronchoscopist (one of three consultants and two registrars) and two nurses assessed patients degree of coughing, choking, sedation and overall tolerance of the procedure using a 10-point visual analogue scale. All patients were given 2–4 mg of midazolam as a sedative as is normal practice in our trust. Method of local anaesthetics and outcome of the bronchoscopy were noted. Results were analysed with a paired t test.

**Results** 33 patients were assessed, 14 patients had direct vision lidocaine and 19 had transcriceid lidocaine. 2 of the procedures were abandoned due to patient's intolerance (both in the direct vision group). There was a significant reduction in coughing (3.5 vs. 5.7  $p$  value 0.009) choking (1.9 vs. 3.9  $p$  0.004) and overall tolerance was better in the transcriceid group (8.0 vs. 5.6  $p$  0.003). There was no difference in the degree of sedation (5.4 vs. 4.9  $p$  0.4). There was no significant difference in the amount of successful biopsies performed in each group. There was no difference in the amount of midazolam given to each group (2.65mg vs. 2.68mg) and the differences were preserved despite the individual bronchoscopist.

**Conclusions** In this small pilot study The transcriceid group coughed and choked less and tolerated the procedure better in this survey. There was no difference between the groups in terms of sedation, total midazolam dosage or operator suggesting that this difference may due to the differing methods of local anaesthesia. A previous patient survey in our trust has shown patients themselves tolerated the transcriceid approach well. Further studies are needed to fully assess the differences between these two approaches and inform further practice.

### COPD: a clinical spectrum

#### M18 THE RELATIONSHIP BETWEEN ANXIETY AND DEPRESSION TO EXACERBATIONS OF COPD RESULTING IN HOSPITAL ADMISSIONS; A NARRATIVE SYSTEMATIC REVIEW

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10.1136/thoraxjnl-2013-204457.428