All procedures were performed with the patient self-ventilating under deep sedation with propofol using a flexible bronchoscope and 2.4 mm cryoprobe (ERBE). All but one procedure was performed under fluoroscopy guidance. All but the first two cases were performed following intubation with an uncuffed ET tube (Bronchoflex, Rusch). We introduced prophylactic IV tranexamic acid 1 g as premedication and endobronchial adrenaline routinely as part of our protocol after the first 5 cases. 1–5 samples were taken per procedure from several sub-segments of one lobe pre-selected by CT imaging.

Results 14 procedures were carried out on 13 patients. 9 patients were male. Mean age 63, mean predicted TLCO 50%; mean number of biopsies 2.7; mean aggregate biopsy size 624 mm^3.

Complications: 2 pneumothoraces requiring chest drain insertion; 1 case of moderate bleeding and 1 case of severe bleeding managed with endobronchial adrenaline and suction only.

All cases were performed as outpatient day cases with patients discharged home 2–4 h after the procedure except the 2 patients requiring chest drains.

Abstract S42 Table 1 Patient characteristics

Case	Sex	Age	Number of biopsies	Aggregate biopsy size in mm^3	Diagnosis
1	M	66	3	1800	Normal lung parenchyma
2	M	75	2	118	UIP
3	F	60	3	410	NSIP
4	M	66	1	125	Interstitial fibrosis
5	M	64	1	60	HP
6	M	44	1	80	NSIP
7	F	73	4	147	HP
8	M	74	5	1200	CLL
9	M	68	2	1120	Interstitial fibrosis
10	M	41	4	810	Organising Pneumonia
11	M	59	3	168	Interstitial fibrosis
12	F	57	4	2000	UIP
13	M	64	1	75	Non-diagnostic
14	F	67	2	pending	pending

Conclusions Our transbronchial cryobiopsy service is comparable in complication rates and diagnostic yield with larger case series from established centres outside the UK. Transbronchial cryobiopsy provides potential for minimally-invasive acquisition of sizeable lung biopsies. Further research is needed to establish whether transbronchial cryobiopsy should replace surgical lung biopsy in selected cases.

REFERENCE

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S43 MORTALITY FOLLOWING SURGICAL LUNG BIOPSY FOR THE DIAGNOSIS OF INTERSTITIAL LUNG DISEASE IN THE UNITED STATES: 2000–2011

JP Hutchinson, TM McKeever, AW Fogarty, RB Hubbard. *University of Nottingham, Nottingham, UK*

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Introduction Surgical lung biopsy can help to achieve a specific diagnosis in interstitial lung disease, but has associated risks. Most currently available mortality data come from case series.

Objective We aimed to assess in-hospital mortality following surgical lung biopsy for interstitial lung disease in a national secondary care dataset.

Methods Data were obtained from the Nationwide Inpatient Sample, an anonymised yearly sample of US community hospitals developed for the Healthcare Cost and Utilisation Project (HCUP). We identified cases from 2000–2011 using International Classification of Diseases (ICD-9-CM) codes for interstitial lung disease, and procedure codes for surgical lung biopsies. Lung resections and cases of lung cancer were excluded. We estimated numbers of biopsies nationwide and in-hospital mortality, and used multivariate logistic regression to assess risk factors for mortality, adjusting for sex, age, geographic region, co-morbidity, type of operation, and provisional diagnosis.

Results We estimated there to be around 12,000 surgical lung biopsies performed annually for interstitial lung disease in the United States, two-thirds of which were performed electively. In-hospital mortality was 1.7% for elective procedures, but significantly higher for non-elective procedures (16.0%). Male sex, increasing age, increasing co-morbidity, open surgery and a provisional diagnosis of idiopathic pulmonary fibrosis or connective tissue disease related interstitial lung disease were risk factors for increased mortality.

Conclusions In-hospital mortality following elective surgical lung biopsy for interstitial lung disease is just under 2%, but significantly higher for unplanned procedures. The mortality risk and risk factors for death should be taken into account when counselling patients on whether to pursue a histological diagnosis.

S44 PROGNOSTIC SCORING SYSTEMS FOR IDIOPATHIC PULMONARY FIBROSIS: COMPARISON OF THE COMPOSITE PHYSIOLOGIC INDEX (CPI) AND THE GAP SCORE

K Relf, K Sylvester, M Toshner, H Parfrey. *Papworth NHSFT, Cambridge, UK*

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Idiopathic Pulmonary Fibrosis (IPF) is a progressive, scarring lung disease with a poor prognosis and median survival of 3 years. It is a heterogeneous disorder with varying rates of progression, which presents a challenge for accurate prognostic prediction. The CPI[1] and the GAP[2] score are validated scoring systems for prognostic determination in IPF. However, it remains unclear which is the optimal method for accurate prediction of mortality in IPF. Therefore, a comparison of the predictive ability of the GAP score and CPI was undertaken in a cohort of IPF patients.

Methods Baseline data were collected retrospectively from 213 IPF patients (in accordance with ATS/ERS criteria and MDT consensus) from a single centre in the UK between 19th April 2007 and 14th July 2014. Thirty-eight patients were excluded, either because pulmonary function test results could not be obtained or the patient received a lung transplant during follow-up. Gender, age, FVC and DLCO were used to calculate the GAP score whilst FVC, FEV1 and DLCO were used for the CPI. Spearman's correlation was used to analyse the relationship between GAP score or CPI and survival time. The ability of the scoring systems to predict survival at 1 and 3 years was assessed using ROC curve analysis.