patient records (ED and inpatient) were keyword searched for "pneumothorax" and x-rays were interrogated. We used HRG code DZ26B ("Pneumothorax without complications"), with a tariff of £1840.83 per episode to calculate cost implications. Measure of agreement of PSP size was assessed with Cohen's κ.

Results 43 confirmed pneumothorax cases were identified, 37 PSP. Of those with PSP: mean (SD) age was 28 (6.9) years, 31 (84%) were male, 23 (62%) were right sided. See Abstract P35 table 1 for assessment of PSP size. 21 (56.8%) had NA, successfully in 8 (38%). 17 (46%) patients had an ICD placed; 12 (70.6%) with <14F drains. Median length of stay following ICD was 5 (IQR 2–12) days. 28 (75.6%) had appropriate adherence to BTS guidelines (4 (10.8%) were not aspirated, 5 (13.5%) had a large, rather than small, ICD). 14 (37.8%) patients were sent for thoracoscopic surgery (on site), 4 (9.2%) PSP not resolving, 10 due to ipsi-, or contralateral, reoccurrence of PSP. If Nationally 10% of patients do not have NA as first line treatment, then (assuming a 40% success rate), this may be costing the NHS in England up to £438 412 a year in preventable admissions. Adherence to ACCP guidance would cost the NHS in England an extra £3.9 million in additional ICDs and hospital admissions.

Abstract P35 Table 1 Assessment, and agreement, of PSP size

Guideline	Measurement	Large n=(%)	κ
BTS	Interpleural space >2 cm at level of hilum	15 (40.5)	
ACCP	Interpleural space >3 cm from apex	30 (81.1)	0.275

ACCP, American College of Chest Physicians; BTS, British Thoracic Society.

Conclusions ACCP and BTS guidance on PSP size have only poor-fair agreement. Local practice to increase NA rates and use of small drains should be adopted. Adherence to appropriate National guidelines has large healthcare economic implications.

REFERENCES

1. Management of spontaneous pneumothorax: British Thoracic Society pleural disease guideline 2010. *Thorax* 2010;**65**(Suppl 2):ii18–31.
2. http://www.hesonline.nhs.uk/ (accessed 7 Jul 2011).

P36 RESPIRATORY FUNCTIONAL STATUS AFTER INTRAPLEURAL T-PA ADMINISTRATION FOR COMPLICATED PARAPNEUMONIC EFFUSIONS

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Introduction and Objectives In a large-scale, multicentered randomised trial, intrapleural administration of streptokinase has been proved unsuccessful among patients with pleural infection but >80% of them had visibly purulent pleural fluid while small bore chest tubes (median diameter: 12F) had been used. The aim of our study was to investigate lung function and exercise capacity after intrapleural administration of recombinant tissue plasminogen activator (t-PA) in adult patients with complicated parapneumonic pleural effusion (CPE).

Methods Fifteen consecutive patients (mean age 50.2±19.3 years) with CPE were included. Chest tube (13 patients: 32F, 2 patients: 10F) was inserted under guidance of computed tomography and all patients received IV antibiotics. After pleural fluid drainage has been stopped for 24 h, 25 mg t-PA/day was administered via chest tube for two consecutive days. We evaluated patients with spirometry before t-PA, 1 day after chest tube removal and 1 month after discharge. During the second and third time-point evaluations, 6 min walking test was also performed.

Results Patients reported symptoms 10.7±7.4 days before hospital admission while all of them demonstrated loculated effusions on computed tomography. The mean production of fluid was 721.3±821.7 ml before and 1.500±107.1 ml after t-PA administration ($p<0.001$). Improvement in lung function and exercise capacity during follow-up are presented on Abstract P36 table 1. FVC had been increased by 572.6±653.5 ml initially and by 575.8±366.6 ml 1 month later. VATS was necessary only for one patient. Adverse events were pain (7/15) and minor bleeding (2/15) at the site of chest tube insertion.

Abstract P36 Table 1 Pleural fluid characteristics, lung function and exercise capacity during follow-up

pH	7.22±0.15
Cells (mm^3)	1777±1447
Neutrophils (%)	65.5±12.6
LDH	3120±6097
FVC before t-PA (L)	2.4±0.73 (51.6±14.8% pred)
FEV_1 before t-PA (L)	2±0.6 (52.8±16.1% pred)
FVC after tube removal (L)	2.8±0.8 (63.4±13.4% pred)
FEV_1 after tube removal (L)	2.3±0.8 (64.3±17.4% pred)
6 MWT after tube removal (m)	528±116
FVC one month after discharge (L)	3.7±0.8 (83.5±12.2% pred)
FEV_1 one month after discharge (L)	3±0.8 (85.7±17.1% pred)
6 MWT one month after discharge (m)	573.2±83

Conclusion Intrapleural administration of t-PA for CPE was an effective treatment considering functional status of the respiratory system during follow-up.

COPD: a systemic disease or a co-morbid condition?

P37 MUSCLE MASS IN COPD PATIENTS RECEIVING ANGIOTENSIN II RECEPTOR BLOCKERS AND ACE-INHIBITORS

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Background Skeletal muscle dysfunction is well recognised in chronic obstructive pulmonary disease (COPD) and is associated with increased morbidity and mortality. Considerable circumstantial evidence supports a role for renin-angiotensin systems in skeletal muscle turnover. Angiotensin II (ATII) administration causes cachexia through several biological mechanisms. Angiotensin converting enzyme inhibitors (ACE-I) block the conversion of angiotensin I to ATII. Previous pilot studies have shown that the administration of ATII receptor blockers (ARB) or ACE-I to COPD patients may increase quadriceps strength and peak work rate (Andreas *et al*, 2006; Di Marco *et al*, 2010). We hypothesised that in an unselected COPD population referred for pulmonary rehabilitation (PR), those receiving ARB or ACE-I drugs would have preserved muscle mass.

Methods Data from 373 consecutive COPD patients (213M: 160F; mean age 68.3; median FEV_1 41% predicted) referred to an outpatient pulmonary rehabilitation programme were analysed. Patients were divided into those receiving either an ARB or ACE-I and controls (those receiving neither drug). Fat free mass (FFM; measured by bioelectric impedance analysis), incremental shuttle walk

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