CONFERENCE REPORT

Breathing new life into respiratory medicine? Report of the 2004 BTS Winter Meeting

D J Powrie, J R Hurst

Thorax 2005;60:183–186. doi: 10.1136/thx.2005.040584

An overview of some of the key topics presented at the BTS Winter Meeting held in London in December 2004

The Winter Meeting of the BTS affords us the opportunity to catch up with friends and colleagues and to keep abreast of recent advances. Perhaps most importantly, it is also an ideal forum for the Society to raise the profile of respiratory medicine. This year's meeting was attended by a record 1710 delegates. What follows is a personal review.

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

COPD finally seems to be casting off its mantle as the Cinderella specialty of respiratory medicine and this was borne out by the amount of time devoted to it at this year's meeting.

A symposium on susceptibility and disease progression was well attended and there were a further eight spoken and poster sessions. A lot of interest was focused on exacerbations. The burden of these on the health service is well known and three studies examined the effect of comfort visits and the establishment of an integrated care programme on admissions.^{1–3} The role of viral infections in the pathogenesis of COPD was highlighted by work from London and Belfast showing that the presence of respiratory syncytial virus is associated with a faster decline in lung function, that colonisation with the Epstein-Barr virus occurs in stable COPD, and that exacerbations associated with cold symptoms are more severe.^{4–6}

Sessions on pulmonary rehabilitation revealed the importance of respiratory muscle strength in exercise limitation,⁷ the possible use of upper arm circumference as an estimate of body mass index (BMI),⁸ and improvements in weight and health status following food fortification and dietary advice.⁹ A study from Leeds suggested that longer courses of pulmonary rehabilitation may lead to greater improvements in health status and exercise tolerance and, as such, raise possible health resource implications.¹⁰

A spoken session on the management of severe disease revealed that mortality in patients admitted with COPD exceeds 50% at 4 years, thus emphasising the importance of this problem.¹¹ Encouraging pilot data from the Brompton Hospital demonstrated significant benefit in some patients from bronchoscopic lung volume reduction in terms of improved lung function and reduced dynamic hyperinflation.¹²

We await the results of larger trials to clarify the role of this procedure. Data from the COPD and Asthma Outcome Study (CAOS) suggested that clinicians in critical care units tend to be overly pessimistic when predicting survival.¹³ When coupled with results suggesting that 96% of survivors would wish to receive critical care again and a study from Liverpool showing that worsening health status is associated with increased willingness to receive non-invasive ventilation (NIV), one could suggest that clinicians may need to re-examine their attitudes to critical care in COPD.^{14 15} Further food for thought was provided by a paper from primary care in South London suggesting that the palliative care needs of patients with COPD were poorly met.¹⁶ A poster from Manchester showed that, at present, assessment and follow up of patients on oxygen concentrators is poor.¹⁷ With this in mind, it was encouraging that the session regarding changes to the home oxygen service was well attended and provoked lively discussion.

ASTHMA

Asthma continues to generate considerable interest—both in paediatric and adult disease, and basic and clinical science. A particular focus this year was provided by Professor Chilvers who delivered the Altounyan lecture entitled “The eosinophil is dead, long live the neutrophil”. His theme was the pathobiology of asthma and, in particular, the role of the neutrophil in the more severe disease that characterises the clinical workload in secondary and tertiary care. Reflecting clinical priorities, a number of abstracts focused on difficult asthma. Deaths in this group were reported to be related to psychosocial morbidity, poor compliance and inadequate management.¹⁸ In an attempt to optimise management and reduce exacerbations, a group from Leicester described their experience using a technique based on reducing sputum eosinophils.¹⁹ The same group reported findings of increased membrane bound tumour necrosis factor (TNF)- α on the peripheral blood monocytes of such patients,²⁰ and an approach to the management of difficult asthma using intramuscular triamcinolone—a presentation which provoked considerable debate.²¹

In contrast to poor compliance, the issue of steroid resistance was examined in a study by Tomlinson and colleagues who reported ongoing steroid resistance in active smokers, with the suggestion that such patients may require higher doses of steroid than their non-smoking peers.²² The use of steroids in children remains a

See end of article for authors' affiliations

Correspondence to:
Dr D J Powrie, Academic
Unit of Respiratory
Medicine, Dominion
House, St Bartholomew's
Hospital, London EC1A
7BE, UK; duncanpowrie@
hotmail.com

concern, and Jani *et al* showed that the use of higher doses of these drugs in children results in a greater rate of increase in BMI.²³

A major histological feature of asthma, present in school age children and adults, is epithelial basement membrane thickening and a study from the Brompton Hospital described the appearance of such lesions at an earlier age in pre-school children with troublesome wheeze.²⁴ Rhinovirus is an important cause of asthma exacerbations in both adults and children, and Wark *et al* presented in vitro work examining the effects of rhinovirus exposure on bronchial epithelial cells, focusing on mediators of the innate immune system.^{25–26}

The third major asthma session, held jointly with the BSACI, comprised an animated pro-con debate on possible interactions of the upper and lower airways, a topic explored further in abstracts from Ipswich on the genetic basis for a “unified airway” and the effects of corticosteroid treatment in such patients.^{27–28} In an Olympic year it was interesting to read about the diagnosis of exercise induced asthma in Olympic athletes and, finally, Hallsworth and colleagues presented the results of a wide consultation aiming to define priorities for future asthma research, the model of which could well prove useful for those involved in setting research priorities elsewhere.^{29–30}

SLEEP AND VENTILATION

Those of us who wonder about the compliance of patients on continuous positive airway pressure (CPAP) would have been reassured to hear that symptomatic improvement occurs even with low compliance, but that better compliance results in greater improvement.³¹ Less reassuring was the report of an extremely high incidence of risk factors for obstructive sleep apnoea (OSA) among drivers of large goods vehicles.³² The use of non-invasive ventilation (NIV) in motor neurone disease is somewhat controversial and referral infrequent, so it was with interest that we heard Bourke and colleagues present data from a randomised controlled trial demonstrating that NIV maintains health status and improves survival in patients with normal or moderately impaired bulbar function.³³

INTERSTITIAL LUNG DISEASE

Sessions at this year's meeting included a “state of the art” symposium and spoken presentations on molecular mechanisms and clinical aspects of pulmonary fibrosis. Disease progression is difficult to predict and we heard of possible roles for cardiopulmonary exercise testing and measurement of serum KL-6, a marker of epithelial damage, in assessing prognosis.^{34–35} As part of the Young Investigators Symposium, Dr Johns presented data suggesting a potential role for the thrombin receptor PAR₁ in the response to lung injury characteristic of fibroproliferative lung diseases.³⁶ Two studies were presented from London and Dublin which sought to shed further light on the role of the growth factor TGFβ.^{37–38} We also heard of a possible mechanism whereby simvastatin might have a role in treatment.³⁹

INFECTION

A number of abstracts presenting research on tuberculosis (TB) were presented this year, including an approach to screening high risk individuals in London using mobile digital radiography that was reported on BBC news.⁴⁰ Certainly there are great difficulties in developing models of care for marginalised groups with TB.^{41–42} Reassuringly, levels of MDR-TB remain stable.⁴³ Work exploring basic mechanisms in TB included a presentation by Dr Elkington on the induction of matrix degrading metalloproteinases, for which he was awarded the BTS Young Investigators Prize.⁴⁴

Interleukin (IL)-8 is required for the formation of granulomas and O’Kane *et al* reported a study demonstrating production of this cytokine from lung fibroblasts.⁴⁵ In contrast, IL-4 may contribute to a failure to contain disease and Dheda and colleagues reported their work on the effects of IL-4 and the splice variant antagonist IL-4Δ2.⁴⁶ A number of antimicrobial proteins confer protection in the lung, from TB and other organisms, and Derry *et al* presented an original and impressive screening method for the identification of novel proteins produced by cytotoxic lymphocytes.⁴⁷

The other major infection problem is pneumonia. The PIVOT trial was a randomised study of oral versus intravenous antibiotics in children with pneumonia.⁴⁸ The equivalence demonstrated between such approaches will be reassuring to many paediatricians and has potentially important cost implications for the NHS. In contrast, a group from Newcastle reported findings of ongoing respiratory morbidity following episodes of childhood pneumonia which have implications for the way such children are followed up.⁴⁹

CYSTIC FIBROSIS (CF)

The 2004 BTS meeting included two spoken sessions on CF exploring “emerging issues” and developments in basic science. A group from Nottingham described a national survey of acute renal failure in CF and reported a significant increase, perhaps related to the combination of ceftazidime and gentamicin.⁵⁰ Using nebulised tobramycin—reported to be equivalent to intravenous in a study of acute respiratory exacerbations—may be one approach to renal protection.⁵¹ Much of the airway damage in CF may be attributed to neutrophil activation and Mackerness and colleagues presented work detecting novel neutrophil stimulating mediators in CF sputum.⁵² Elsewhere, the potential role of TGFβ₁ in the airway remodelling of children with CF was described by Hilliard *et al*.⁵³

MALIGNANT DISEASE

Developments in thoracic malignancy were discussed at an afternoon symposium. Abstract presentations were many and varied, ranging from molecular mechanisms to the organisation of care. Reflecting progress in basic science, Welsh and colleagues reported their findings suggesting that greater numbers of macrophages within tumour islets in non-small cell lung cancer are associated with improved survival.⁵⁴ There is currently much interest in genomics, and an abstract from Manchester reported the initial results of translating the study of tumour markers into a clinically useful tool using “fuzzy logic”, with promising results.⁵⁵ Elsewhere, the patchy provision of techniques such as interventional bronchoscopy and medical thoracoscopy continue to stimulate interest,^{56–58} and Slade and Pengelly described their use of CuSum analysis to assess competency in transbronchial needle aspiration.⁵⁹ Crosbie and colleagues presented an audit of their experience dealing with the difficult problem of carcinoma in situ, reporting that this most often occurs in association with obvious tumour.⁶⁰ The incidence of mesothelioma recurrence at sites of pleural biopsy was reported as 27% from a unit where prophylactic radiotherapy was not routinely given, while Smith *et al* reported success with administering such radiotherapy as a single fraction with advantages to patients and health services.^{61–62} Similarly, Eraut and colleagues reported success with accelerated radical radiotherapy as a more practical alternative to CHART.⁶³ Finally, while developments in treatment and biology may translate to survival advantage, it also remains crucially important that patients are referred for assessment in a timely manner and a study by Wood *et al* revealed considerable variability in the referral patterns of individual GPs to secondary care.⁶⁴

PLEURAL DISEASE

The thorny issue of which sclerosant is best for medical pleurodesis was addressed by Ladd and colleagues. They found little difference in efficacy between talc, tetracycline, and bleomycin, but increased survival with bleomycin.⁶⁵ An audit of Abrams' needle biopsies found the procedure to be diagnostic in less than 50% of cases.⁶⁶ With this in mind, it was interesting to hear of the broadly positive experience in Nottingham following the establishment of a medical thoracoscopy service.⁶⁷ Elsewhere we were presented with the somewhat worrying figure of a 25% complication rate associated with intercostal chest drain insertion in Norwich.⁶⁸ With regard to pleural infection, Maskell and colleagues introduced RAPID—a novel scoring system with a potential role in assessing risk of death from empyema.⁶⁹

AND FINALLY . . .

In his President's address, Professor Gibson expounded a passionate argument in a call for common sense whilst addressing the current obsession with evidence based medicine. The British Lung Foundation (BLF) Young Investigators Prize was won by Dr Walmsley for her presentation on the effects of hypoxia on neutrophil apoptosis⁷⁰ and Dr Elkington (whose work on TB has already been mentioned) was awarded the BTS prize. This stimulating session also included presentations on the role of salbutamol in ARDS and epithelial to mesenchymal transition following lung transplantation.^{71 72}

The programme of this year's meeting was varied and interesting and the overall quality of presentations high. Last year saw the BLF achieve a record fundraising total and this fact—allied to the quality of the research presented at the Young Investigators Symposium—allows us to look to the future with optimism.

Authors' affiliations

D J Powrie, J R Hurst, Academic Unit of Respiratory Medicine, St Bartholomew's Hospital, London EC1A 7BE, UK

DP is in receipt of an educational grant from Boehringer Ingelheim Ltd.

REFERENCES

- Jones-Perrott S, Crutchley J, Rowley J. Do comfort visits reduce hospital re-admissions in patients with chronic obstructive pulmonary disease (COPD)? A pilot study. *Thorax* 2004;**59**(Suppl II):P16.
- O'Kelly N, Boldy D, Young K. Reduction of hospital admissions with an integrated COPD programme in East Lincolnshire. *Thorax* 2004;**59**(Suppl II):P17.
- Khan A, Barnett M, Dixon N, et al. Effectiveness of an outreach COPD team in reducing hospital admissions. *Thorax* 2004;**59**(Suppl II):P19.
- Wilkinson TMA, Hurst JR, Perera WR, et al. Consequences of respiratory syncytial virus infection in patients with stable COPD. *Thorax* 2004;**59**(Suppl II):T6.
- McManus TE, Marley AM, Baxter NB, et al. Latent viral infection: a possible role in the pathogenesis of COPD. *Thorax* 2004;**59**(Suppl II):P50.
- Hurst JR, Donaldson GC, Wilkinson TMA, et al. Symptom and peak flow changes during the common cold and at exacerbation in patients with COPD. *Thorax* 2004;**59**(Suppl II):P14.
- Garrod R, Marshall J. Respiratory muscle weakness and peripheral muscle weakness in submaximal and maximal exercise in patients with COPD. *Thorax* 2004;**59**(Suppl II):S1.
- Rees D, Graves J, Ayres J, et al. Mid-upper arm circumference provides a good indicator of body mass index in patients with COPD. *Thorax* 2004;**59**(Suppl II):S3.
- Weekes CE, Bateman NT, Elia M, et al. Tailored dietary advice and food fortification results in weight gain and clinical benefit in malnourished patients with chronic obstructive pulmonary disease. *Thorax* 2004;**59**(Suppl II):S5.
- Moore CA, Emmett L, Jones A, et al. Prolonged pulmonary rehabilitation may lead to greater improvement in exercise capacity and health related quality of life. *Thorax* 2004;**59**(Suppl II):S88.
- Griffin J, Tabberer M. COPD death: facing the problem. *Thorax* 2004;**59**(Suppl II):S43.
- Hopkinson NS, Toma TP, Hansell DM, et al. Effect of bronchoscopic lung volume reduction on dynamic hyperinflation and exercise in emphysema. *Thorax* 2004;**59**(Suppl II):S40.
- Wildman MJ, Groves J, Reeves B, et al. Outcome prediction for admissions with COPD to UK critical care units from CAOS: the COPD and Asthma Outcome Study. *Thorax* 2004;**59**(Suppl II):S39.
- Wildman MJ, Groves J, Reeves B, et al. Health related quality of life and future treatment preferences of patients with COPD admitted to UK critical care units from CAOS: the COPD and Asthma Outcome Study. *Thorax* 2004;**59**(Suppl II):S38.
- Sulaiman MI, Chakrabarti B, Warburton CJ, et al. A study of patient attitudes towards non-invasive ventilatory support and relation to health status in COPD. *Thorax* 2004;**59**(Suppl II):S97.
- White P, Elkington H, Addington-Hall J, et al. Palliative care needs of COPD patients in the last year of life. *Thorax* 2004;**59**(Suppl II):S42.
- Young H, Hoyle S, Butler S, et al. Oxygen concentrators: are they correctly prescribed and when are they cost effective? *Thorax* 2004;**59**(Suppl II):P67.
- Harrison BDW. An ongoing confidential enquiry into asthma deaths in patients aged <65 years. *Thorax* 2004;**59**(Suppl II):S16.
- Shaw DE, Berry MA, Brightling CE, et al. Reducing asthma exacerbations in practice: an observational study. *Thorax* 2004;**59**(Suppl II):S100.
- Berry MA, Shaw DE, Brightling CE, et al. Elevated membrane bound TNF α on peripheral blood monocytes of adults with refractory asthma. *Thorax* 2004;**59**(Suppl II):S7.
- Shaw DE, Murphy A, Berry MA, et al. An approach to the identification and management of poor treatment concordance in potentially life threatening asthma. *Thorax* 2004;**59**(Suppl II):S101.
- Tomlinson JEM, McMahon AD, Chaudhuri R, et al. Efficacy of low and high dose inhaled corticosteroid in smokers versus non-smokers with mild asthma. *Thorax* 2004;**59**(Suppl II):S27.
- Jani M, Ogston S, Mukhopadhyay S. Annual increase in body mass index in children with asthma on inhaled steroids. *Thorax* 2004;**59**(Suppl II):S32.
- Saglan S, Payne DNR, Nicholson AG, et al. Thickening of the epithelial reticular basement membrane in preschool children with troublesome wheeze. *Thorax* 2004;**59**(Suppl II):S60.
- Wark PAB, Johnston SL, Bucchieri F, et al. Asthmatic bronchial epithelial cells have a deficient innate immune response to infection with rhinovirus. *Thorax* 2004;**59**(Suppl II):S49.
- Wark PAB, Bucchieri F, Hamilton LM, et al. Inflammatory mediators release from asthmatic and non-asthmatic bronchial epithelial cells following infection with rhinovirus. *Thorax* 2004;**59**(Suppl II):S50.
- Lee DKC. Unified airway genetics. *Thorax* 2004;**59**(Suppl II):P86.
- Lee DKC. Corticosteroid therapy in the unified airway. *Thorax* 2004;**59**(Suppl II):P92.
- Dickinson J, Whyte G, McConnell A, et al. EVH: a useful challenge for diagnosing EIA in Olympic athletes. *Thorax* 2004;**59**(Suppl II):P26.
- Hallsworth MP, Major PJ, Barnes NC. Where next in clinical asthma research? An innovative approach to research prioritisation. *Thorax* 2004;**59**(Suppl II):S102.
- Marshall MJ, Coughlin SR. Does positive airway pressure therapy (PAP) provide a symptomatic benefit at low levels of compliance in obstructive sleep apnoea patients? *Thorax* 2004;**59**(Suppl II):S44.
- Moylan J, Marshall MJ. Are the recent changes in the DVLA D4 medical form sufficient to increase detection of obstructive sleep apnoea in a high risk driving population. *Thorax* 2004;**59**(Suppl II):P106.
- Bourke SC, Tomlinson M, Williams TL, et al. Randomised controlled trial of non-invasive ventilation in motor neurone disease. *Thorax* 2004;**59**(Suppl II):S94.
- Tuggey JM, Sundar R, McDonald W, et al. Role of clinical, physiological, and radiological scores in predicting change in patients with idiopathic pulmonary fibrosis and sarcoidosis. *Thorax* 2004;**59**(Suppl II):S120.
- Goh NSL, Sato H, du Bois RM, et al. Serum KL-6 levels are predictive of outcome in patients with idiopathic pulmonary fibrosis. *Thorax* 2004;**59**(Suppl II):S121.
- Johns RH, Howell DCJ, Laurent GJ, et al. Absence of proteinase activated receptor-1 signalling affords protection from experimentally induced lung inflammation and fibrosis. *Thorax* 2004;**59**(Suppl II):T2.
- Renzone EA, Abraham DJ, Shi-Wen X, et al. Novel transforming growth factor beta transcriptional targets in adult lung fibroblasts identified by microarray analysis. *Thorax* 2004;**59**(Suppl II):S133.
- Keating DK, Sadlier D, Hurson C, et al. Oligonucleotide microarray analysis reveals coordinated expression of extracellular matrix associated genes in pulmonary fibrosis in vitro. *Thorax* 2004;**59**(Suppl II):S134.
- Watts K, Spiteri M. Simvastatin inhibits growth factor expression and modulates profibrotic markers in human lung fibroblasts. *Thorax* 2004;**59**(Suppl II):S132.
- Story A, van Hest NAH, Goodburn A, et al. Targeted mobile digital chest radiography in the control of tuberculosis in high risk groups in London: a pilot project. *Thorax* 2004;**59**(Suppl II):P161.
- Story A, Roberts W, Hayward AC. Tuberculosis in London: prevalence of disease and risk factors for poor adherence, drug resistance, and relapse. *Thorax* 2004;**59**(Suppl II):S115.
- Craig GM, Booth H, Story A, et al. Preliminary findings from the London TB link project targeting homeless and marginalised groups. *Thorax* 2004;**59**(Suppl II):P159.
- Antoine D, Crofts J, Story A, et al. Trends in anti-tuberculosis drugs resistance in England and Wales 1998–2001. *Thorax* 2004;**59**(Suppl II):S116.
- Elkington PTG, O'Kane CM, Boyle JJ, et al. Mechanisms regulating matrix metalloproteinase gene expression and secretion in pulmonary tuberculosis. *Thorax* 2004;**59**(Suppl II):T5.
- O'Kane CM, Elkington PTG, Friedland JS. Fibroblasts as a potent source of CXCL8 in tuberculosis. *Thorax* 2004;**59**(Suppl II):S10.
- Dheda K, Huggett JF, Kim LU, et al. IL-4 Δ 2 and TH2 cytokines in human pulmonary tuberculosis. *Thorax* 2004;**59**(Suppl II):S11.

- 47 **Derry DD**, Possee RD, Griffin GE, *et al.* Discovery of proteins with role in defence against infection. *Thorax* 2004;**59**(Suppl II):S51.
- 48 **Atkinson M**, Lakhnapaul M, Smyth A, *et al.* PIVOT trial: a multicentre randomised equivalence trial to compare oral and IV treatment for community acquired pneumonia in children. *Thorax* 2004;**59**(Suppl II):S66.
- 49 **Eastham KM**, Parker L, Hammal D, *et al.* Community acquired pneumonia requiring admission to hospital is associated with chronic respiratory morbidity in childhood. *Thorax* 2004;**59**(Suppl II):S67.
- 50 **Bertenshaw CJ**, Watson AR, Choonara I, *et al.* The study of cystic fibrosis and acute renal failure (SCARF project): case series. *Thorax* 2004;**59**(Suppl II):S33.
- 51 **Al-Aloul M**, Miller H, Ledson MJ, *et al.* Tobramycin nebuliser solution (TOBI): a renal sparing alternative to intravenous (IV) tobramycin in acute pulmonary exacerbations in CF. *Thorax* 2004;**59**(Suppl II):P120.
- 52 **Mackerness KJ**, Bush A, Jose PJ. Characterisation of neutrophil stimulating mediators in cystic fibrosis sputum. *Thorax* 2004;**59**(Suppl II):S53.
- 53 **Hilliard TN**, Shute J, Nicholson AG, *et al.* Transforming growth factor β 1 and airway remodelling in children with cystic fibrosis. *Thorax* 2004;**59**(Suppl II):S79.
- 54 **Welsh T**, Green RH, Richardson D, *et al.* Tumour islet macrophages markedly improve survival in non small cell lung cancer. *Thorax* 2004;**59**(Suppl II):S71.
- 55 **Ambalavanan S**, Hanley SP, Weir DC, *et al.* The use of fuzzy logic based tumour markers for diagnosis of lung cancer. *Thorax* 2004;**59**(Suppl II):S75.
- 56 **Mohan K**, Smyth C, Ledson MJ, *et al.* Transbronchial needle aspiration in the UK: a national survey. *Thorax* 2004;**59**(Suppl II):S103.
- 57 **Munavvar M**, Singh H, Corless MJ, *et al.* Survey of the practice of interventional bronchoscopy in UK. *Thorax* 2004;**59**(Suppl II):P76.
- 58 **Burrows NJ**, Ali J, Cox GM. Medical thoracoscopy: a 5 year follow up survey of UK respiratory physicians. *Thorax* 2004;**59**(Suppl II):P135.
- 59 **Slade MG**, Pengelly GC. CuSum analysis to assess competence at transbronchial needle aspiration (TBNA): how many are enough? *Thorax* 2004;**59**(Suppl II):P77.
- 60 **Crosbie PAJ**, Bishop P, Haselton P, *et al.* Carcinoma in situ of the lung: an audit of incidence, treatment and outcome. *Thorax* 2004;**59**(Suppl II):P37.
- 61 **Richardson CM**, Anand A, Chaudhuri A, *et al.* What factors predict local tumour recurrence following biopsy in malignant mesothelioma? *Thorax* 2004;**59**(Suppl II):P41.
- 62 **Smith N**, Maguire J, Carr M, *et al.* Single fraction radiotherapy to drain or thoracoscopy site as effective prophylaxis for tumour seeding in mesothelioma. *Thorax* 2004;**59**(Suppl II):P34.
- 63 **Eraut D**, Davison A, Ansari S, *et al.* Accelerated radical radiotherapy: an alternative to CHART. *Thorax* 2004;**59**(Suppl II):P35.
- 64 **Wood M**, Tuffin R, Spiro S, *et al.* What triggers referrals from primary to secondary care in possible lung cancer? *Thorax* 2004;**59**(Suppl II):P126.
- 65 **Ladd B**, Tuggey J, Bowker C, *et al.* A study to compare the efficiency of sterile talc, tetracycline, and bleomycin as sclerosing agents for medical pleurodesis in the treatment of malignant pleural effusions. *Thorax* 2004;**59**(Suppl II):S125.
- 66 **Chakrabarti B**, Ryland I, Sheard J, *et al.* The role of blind percutaneous pleural biopsy in the investigation of exudative pleural effusions. *Thorax* 2004;**59**(Suppl II):S126.
- 67 **Mallawathantri S**, Lim WS, Kinnear W. Setting up a medical thoracoscopy service: safety and efficacy. *Thorax* 2004;**59**(Suppl II):S130.
- 68 **Mackenzie Ross RV**, Wade R, Pasteur MC. Complications of intercostal chest drains. *Thorax* 2004;**59**(Suppl II):S128.
- 69 **Maskell NA**, Davies CWH, Ghabre R, *et al.* Predictors of survival in patients with pleural infection but without cancer: results of the MRC/BTS MIST trial, ICTN 39138989. *Thorax* 2004;**59**(Suppl II):S127.
- 70 **Walmesley SR**, Print C, Johnson RS, *et al.* Hypoxia inhibits neutrophil apoptosis via hypoxia inducible factor (HIF)-1 α -dependent regulation of NF κ B. *Thorax* 2004;**59**(Suppl II):T4.
- 71 **Perkins GD**, McAuley DF, Gao F, *et al.* Intravenous salbutamol reduced alveolar-capillary permeability and extra-vascular lung water in ARDS: results of the BALTI study. *Thorax* 2004;**59**(Suppl II):T1.
- 72 **Forrest IA**, Murphy D, Lordan JL, *et al.* Epithelial to mesenchymal transition in clinically stable lung transplantation. *Thorax* 2004;**59**(Suppl II):T3.

Register now!

10th European Forum on Quality Improvement in Health Care
13–15 April 2005, ExCel Conference Centre, London
For further information on how to register please go to:
<http://www.quality.bmjpg.com>