CONFERENCE REPORT

British Thoracic Society Winter Meeting 2001

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An overview of some of the key topics presented at the BTS Winter Meeting held in London on 5–7 December 2001.

The 2001 Winter Meeting of the British Thoracic Society covered a wide range of respiratory topics. Over 300 papers were presented and a number of lively symposia were delivered by internationally renowned speakers.

ASTHMA

During 2001 there has been much interest in the progress of new treatments in asthma as clinical trials of several agents targeting the Th1/Th2 imbalance have been published.^{1–3} In a comprehensive review of these studies, Leckie *et al* suggested that the apparently disappointing results reflect the heterogeneous nature of the disease and the fact that individual agents are active against only tiny proportions of a complex inflammatory cascade.¹ A comparative immunohistochemical study of asthma and eosinophilic bronchitis by Brightling *et al* reported a novel and exciting observation which may provide a future therapeutic target in asthma.⁴ Their work, short listed for the BTS/BLF Young Investigator prize (see below), showed that, while there were no differences in eosinophilic inflammation between groups, mast cells were seen within the airway smooth muscle of patients with asthma but not those with eosinophilic bronchitis, and in numbers which negatively correlated with the degree of airway hyperresponsiveness. This suggests that the infiltration of airway smooth muscle by mast cells may be important in the pathogenesis of asthma. Since airway hyperresponsiveness is such a key feature of asthma, it was disappointing to hear that this is an area which remains underused in the UK. Of 139 laboratories responding to Butterfield and Cushley's survey,⁵ only 58 ever measure hyperresponsiveness, most measure it only rarely, and few adhere to published guidelines—suggesting significant room for improvement.

Another often underexplored area in asthma is dysfunctional breathing. In a randomised controlled trial Thomas *et al* showed that the use of a physiotherapy based breathing retraining programme for patients treated for asthma in primary care resulted in significant improvements in health status at 1 and, to some extent, at 6 months.⁶ Perhaps a useful future approach to the management of asthma would see such physical treatments used alongside the new pharmacological advances. It will be many years before we see whether novel approaches to

asthma treatment reap benefits in terms of the prevention of decline in lung function.

Prospective longitudinal studies provide important information about the long term outlook in asthma but are difficult to perform. It was therefore good to see two such studies presented at the meeting demonstrating the accelerated decline in lung function seen in patients with a childhood history of asthma or wheezy bronchitis⁷ and in those with adult onset non-atopic asthma or a significant smoking history.⁸

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

Giving his second Altounyan lecture, Professor Peter Barnes brought about a change of theme this year with "COPD: the new asthma" providing the focus. In particular, we heard about the importance of diverting research into developing a better understanding of the inflammatory nature of COPD, with the hope of identifying new therapeutic agents. Possible candidates include a combination of histone deacetylation (HDAC) reactivators (perhaps conferring steroid responsiveness), CXCR2 antagonists, NFκB inhibitors, or even gene therapy to correct HDAC polymorphisms.

While such approaches look promising for the future, several papers reminded us of the poor prognosis for patients with COPD, especially those admitted to hospital. Risk factors particularly associated with increased mortality include male sex, advanced age with significant co-morbidity,⁹ poor performance status,¹⁰ and nutritional depletion.¹¹ Interestingly, nutritional depletion was shown to be an independent factor associated with poor exercise capacity and reduced activities of daily living.¹² Furthermore, in a study of patients undergoing lung volume reduction surgery, those who responded demonstrated significant increases in BMI correlating with improvements in health status.¹³

PLEURAL DISEASE

Initial data from the first 150 patients enrolled in the MIST trial (multicentre intrapleural streptokinase v placebo in empyema) were presented.¹⁴ Emphasis was placed on the importance of obtaining blood cultures for microbiological diagnosis. A substantial proportion of patients with positive blood cultures were otherwise culture negative. The most common isolate remained *Streptococcus* species (40% *S. milleri*), although significant differences in causal organisms were observed in community acquired and hospital acquired empyemas.

A pilot study of bedside pleural ultrasound imaging by chest physicians was particularly interesting.¹⁵ Middle grade respiratory physicians

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were trained to assess pleural effusions using a portable ultrasound scanner. Early results were encouraging. Management of effusion was aided in 50% of cases and in four patients optimal management would not have been possible without ultrasound imaging of the pleural cavity. The role of medical thoracoscopy in the management of pleural effusions was also discussed by Kerbirou *et al*¹⁶ who presented a year's experience of the procedure in a district general hospital. Medical thorascopies were undertaken in 44 patients for diagnostic purposes or for palliation of malignant pleural effusions. Effusions were controlled in over 90% of patients and the diagnostic yield was comparable to conventional interventional strategies.

BRITISH ORPHAN LUNG DISEASES (BOLD)

We were updated on the progress of the BOLD project and were reminded of the importance of recruiting patients to this important study. There were also interesting reviews of current progress in rare diseases such as lymphangioleiomyomatosis, tracheobronchial amyloidosis, and Churg-Strauss syndrome.

CYSTIC FIBROSIS (CF)

Many of the papers relating to CF at this year's conference concentrated on the problems of cross infection with *Pseudomonas* in CF units. Groups from Newcastle and Liverpool were able to demonstrate cross infection in the adult CF population with epidemic strains of *P aeruginosa*.^{17, 18} Both centres advocate policies of individual patient segregation based on the bacterial genotype. This will have obvious cost and practical resource implications. Screening of CF wards and outpatient facilities in Manchester failed to find an environmental reservoir of epidemic *P aeruginosa*, suggesting that patient to patient spread had been responsible for previous *Pseudomonas* outbreaks.¹⁹ McShane *et al* assessed the prevalence of multiresistant *P aeruginosa* (MRPA) in children with CF.²⁰ Although the prevalence of MRPA was high, it was often transient. MRPA was significantly more likely in those patients with persistently positive cultures and probably reflected increased antibiotic usage in this group.

LUNG CANCER

The resection rates in lung cancer continue to be a source of much debate. The main reason for low resection rates is inoperability due to advanced disease.²¹ A pilot study showed that patients attending a rapid access lung shadows clinic had symptoms for an average of 12.3 weeks before presentation. The failure of patients to recognise that their symptoms might suggest lung cancer was identified as the main reason for delay.²²

Several papers reflected on the recent BTS guidelines on the selection of patients with lung cancer for surgery.^{23, 24} A retrospective review of patients in Sheffield undergoing lung resection for cancer found that 13% of their patients would have been classified as high risk according to the guidelines.²⁴ The proportion undergoing pneumonectomy was significantly greater in the high risk cohort, but there was no statistical difference in complication rates between the two groups. Survival rates in patients with inoperable non-small cell lung cancer (NSCLC) remain poor, although data from Liverpool showed an increase in median survival from 20 weeks to 54 weeks following aggressive oncological treatment and routine follow up by oncologists rather than chest physicians.²⁵ They reported their experience of concurrent chemoradiation in locally advanced inoperable NSCLC.²⁶ Three year survival increased from 31% to 50% and a local control rate of 90.5% was achieved. Future studies to determine the role of positron emission tomography (PET) in lung cancer²⁷ and chemotherapy in mesothelioma²⁸ are eagerly awaited.

TUBERCULOSIS AND INFECTION

Tuberculosis hit the headlines during 2001 with large community outbreaks in the UK and was once again an important topic at this year's meeting. A timely symposium highlighted not only the need for improved infection control, but also exciting new approaches in the detection of recent tuberculous infection which may allow us to achieve this.²⁹ Papers reporting studies of the infectivity and drug resistance of individual isolates suggested that there may be important genotypic differences in mycobacteria from patients infected in different countries³⁰ and that, in some cases, drug resistant tuberculosis may occur as a result of local transmission in the UK.³¹ While advances in the investigation of tuberculosis are encouraging, two papers suggested that—in patients with community acquired pneumonia at least—we are still under-using simple readily available microbiological techniques and that this has a negative impact on our ability to identify responsible organisms.^{32, 33}

THE BTS/BLF YOUNG INVESTIGATORS PRIZE

We were impressed by the high quality research presented by the six shortlisted candidates.^{4, 34–38} While clearly a difficult decision for the judges to make, the eventual winners were Dr Darling and Dr Hind. Dr Darling presented her work on the mechanism of uptake and fate of internalised *P aeruginosa* in cystic fibrosis.³⁵ Dr Hind's research demonstrated alveolar regeneration in a murine model in response to retinoic acid, providing hope for new treatments in diseases such as emphysema.³⁴

AND FINALLY . . .

Good news for all BTS members living under the flight paths of major international airports. Research has shown no increase in respiratory illness in residents living near Birmingham International Airport,³⁹ so we can all sleep soundly in our beds at night (ear plugs optional!)

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