

Conference report

1997 Winter Meeting of the British Thoracic Society

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The 1997 Winter Meeting of the British Thoracic Society attracted over 1300 delegates and 328 posters and presentations covering every aspect of respiratory disease. This article will highlight selected themes from the meeting.

The widespread adoption of inhaled steroids has transformed the management of asthma, yet the increasing recognition that high dose inhaled steroids carry significant risks of systemic adverse effects is stimulating increased interest in alternative ways of controlling airway inflammation. In a symposium on “New therapies for respiratory disease” Professor Tak Lee summarised the data supporting the use of 5-lipoxygenase inhibitors and leukotriene receptor blockers in asthma. These compounds, which are already on the market in the USA and in some European countries, appear to have significant asthma controlling activity that is complementary to β_2 agonists and may prove useful as steroid sparing agents.

Dexa bone densitometry is highlighting the high incidence of osteopenia and osteoporosis secondary to prolonged or frequent steroid use in asthma¹ and such scanning provides a tool for early detection and for monitoring response to treatment. Interpretation of scan results in patients with severe obstructive lung disease is complicated by the effects of immobility and nutritional state on bone density, and further controlled trials in this area are needed.

The origins of asthma in early life form the topic of an ambitious long term environmental intervention study^{2,3} in which an attempt has been made to reduce the early domestic exposure to relevant antigens in a cohort of at-risk infants. Infants are prenatally randomised to allergen avoidance or control groups. These two presentations outlined the evidence to show that it is practicable to control significantly allergen exposure in the home, and the outcome of these interventions is awaited with interest.

The role of corticosteroids remains a focus of therapeutic interest in COPD. The results of the EUROSCOP study were summarised by Professor Tattersfield in a symposium on steroids in airway disease. In this study minimal effects of inhaled steroids were seen on the rate of decline of FEV₁ in a large group of smokers with mild airways disease. No progressive benefit with time was demonstrated and, although small benefits in FEV₁ were seen in sub-analyses of women and in lighter smokers, this study does not support the widespread use of inhaled steroids in COPD, not just because of low efficacy, but also because—despite the low dose of inhaled steroid used—significant side effects such as bruising were seen in the active treatment group.

In contrast to the results of long term use of inhaled steroids, short courses of oral prednisolone do appear to be of benefit in acute exacerbations of COPD.⁴ This prospective double blind randomised study found more rapid improvement in FEV₁ and shortened length of hospital stay

in the patients who received active drug compared with those who received placebo.

Increasing numbers of centres are now offering non-invasive positive pressure ventilation (NIPPV) for acute respiratory failure in COPD, although the level of provision varies widely with region and funding remains haphazard at a local level.⁵ According to a study presented from Leeds, NIV can be delivered successfully on the ward and does not have a major effect on nursing workload.⁶

Several papers highlighted the need for continued vigilance in tuberculosis. Hayward and colleagues⁷ showed how molecular “spoligotyping” could be used in a large scale epidemiological survey of tuberculosis in London to identify clusters of cases who shared identical organisms, presumed to indicate recent transmission. They reported that 19% of cases of tuberculosis in inner London are recently acquired and illustrated how new technologies make possible more precise analysis of patterns of disease spread.

In a symposium on multi-resistant tuberculosis delegates heard a sobering account of one recent hospital outbreak together with useful recommendations on the control of such outbreaks. Although primary resistance remains relatively uncommon in the UK,⁸ cases of active disease continue to arrive from overseas and frequently escape detection at the port of arrival.⁹ Even with good local control measures, it is likely that in future years international travel will bring increasing numbers of cases of multi-resistant tuberculosis to the UK.

While welcoming the general curtailment of tobacco sponsorship of sporting events, many delegates were vocal in their concern about the exemption granted to Formula One motor racing which seemed to send the message that the health risks of tobacco use are in some way negotiable. It was therefore particularly disappointing for delegates when the planned President’s Lecture entitled “How can the Government and chest physicians work together to stop young people smoking?” which was to have been given by Ms Tessa Jowell MP, Minister of State for Public Health, was cancelled by the Minister at short notice. A resolution expressing this concern and disappointment was passed at the Annual General Meeting of the British Thoracic Society and will be communicated to the Minister.

Data from Salford were presented¹⁰ to highlight how the increased risk of lung cancer in smokers persists for many years after they stop, again making the point that lung cancer rates in those who have never been exposed to cigarette smoke (active or passive, past or present) are extremely low.

In a study reported widely in the national press Gore and colleagues¹¹ interviewed patients with non-small cell lung cancer to investigate their satisfaction with the information given to them at the time of diagnosis. While 24% of patients reported frustration that the doctor avoided the word “cancer”, a further 18% wanted “less frightening”

words used. The need for improved training in the area of "breaking bad news" was highlighted.

Progress in the treatment of thoracic malignancy remains slow, but encouraging early results from animal studies in the use of gene therapy to treat mesothelioma were presented by a group from the National Heart and Lung Institute.¹² Heat shock protein gene complexed with liposomes and introduced by intraperitoneal injection into mice bearing asbestos-induced mesothelioma led to significant reductions in tumour size and prolongation of survival. The mechanism is believed to be augmentation of tumour antigen presentation leading to an immune response capable of clearing both transfected and non-transfected tumour cells. Trials in patients with mesothelioma are planned.

Progress in understanding and treating patients with cystic fibrosis continues at a rapid pace. Stern and colleagues¹³ presented the results of the first double blind trial of a single nebulised dose of liposome-mediated gene therapy to the lungs of patients with cystic fibrosis. Modest but promising improvements in airway electrophysiology were seen after active treatment; however, both active and placebo groups showed transient falls in lung function and the active treated group also showed a flu-like systemic reaction lasting about 24 hours. Gene therapy using current vectors remains highly inefficient, and one possible reason was highlighted by studies in the sheep trachea¹⁴ which showed that tracheal mucus was a potent barrier to transfection. Alongside continued efforts to define new ways of improving vector systems,^{15 16} a major growth area is the development of improved ways of detecting non-invasively the effects of gene transfer on the disease processes in the lower airways of patients with cystic fibrosis. Exhaled nitric oxide has been shown not to be a useful marker of cystic fibrosis airway disease (perhaps because it is destroyed locally), but levels of a downstream metabolite of nitric oxide (nitrite) are increased in the breath condensate of patients with cystic fibrosis relative to controls.¹⁷ An additional area of expanding interest is the analysis of airway disease using induced sputum samples. Papers at this meeting indicated that, with appropriate care, a standardised protocol can safely be used to obtain induced sputum samples in patients with cystic fibrosis,¹⁸ COPD,^{19 20} and asthma.²¹

The long-running debate about whether elective antibiotic treatment in cystic fibrosis yields superior results to treatment "as required" for exacerbations was addressed in a multicentre study reported by Elborn *et al.*²² Recruitment had been difficult for this study and the comment was made that many patients were reluctant to risk being randomised to the elective arm of the trial, preferring to be treated "as required". No difference was found between the groups in the rate of decline of lung function at three years; however, the five year results are still awaited. One obstacle to the statistical power of these studies is the increasing tendency of cystic fibrosis centres to be more aggressive with "as required" therapy which reduces the actual difference in the number of treatment courses between this and an elective three monthly antibiotic strategy.

Epidemiological studies showing the high prevalence of sleep apnoea/hypopnoea syndrome (SAHS) have spurred the widespread development of sleep services in recent years. This development triggered a systematic review, published earlier this year,²³ of the evidence for harm due to sleep apnoea and for benefit from intervention. In a symposium entitled "Sleep Apnoea and Public Health" Dr Wright summarised this review which was critical of the paucity of randomised controlled trials in this area, and challenged sleep researchers to come up with additional

evidence. A spirited defence of the evidence was provided by Professor Douglas, ending with agreement that CPAP is of proven efficacy in treating daytime somnolence due to SAHS. More evidence is needed, however, to prove that the cardiovascular consequences of the syndrome can be influenced beneficially by CPAP.

In a symposium entitled "BTS guidelines on interstitial lung disease" Dr Woodcock presented for the first time the draft recommendations of a specially convened BTS committee on diagnosis and assessment of diffuse parenchymal lung disease in adults. The recommendations cover all aspects of the process of diagnosing and quantifying these diseases from imaging through physiological testing to biopsy options. In the discussion there was a consensus that these cases must be managed by respiratory physicians in close association with radiologists and pathologists with expertise in inflammatory lung disease. In most cases appropriate investigational facilities should be available locally, and referral to a regional or supraregional service should only be required for problem cases or if specific facilities are lacking. A contentious area is the need for biopsy samples when imaging and functional tests make cryptogenic fibrosing alveolitis the likely diagnosis. While many centres now consider biopsies to be unnecessary in such cases, it is recognised that treatment outcomes remain poor and improved understanding of this disease process and its cellular biology will be hampered if biopsy tissue is no longer taken.

In the closing hours of the conference Professor Sir Magdi Yacoub delivered the Altounyan address entitled "Lung transplantation: a promise realised?"²⁴ In a wide ranging address he described eloquently how in the space of 20 years this once experimental technique has become a practicable and widely available solution to end stage lung disease from a variety of causes. In addition to a review of the relative merits of the currently available surgical procedures, he described developments in the manipulation of immune tolerance which may yield even better survival figures in the future. While donor shortage remains a major brake on the utilisation of transplantation and xenotransplantation remains far from being clinically applicable, developments in donor organ protection and the relatively new field of living donor lobe transplantation offer hope for increased availability of this remarkable procedure in future years.

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