LETTERS TO THE EDITOR

Reform of the Public Health Act

We agree with Richard Coker1 that the vast majority of non-compliant cases of tuberculosis can be dealt with by a mixture of directly observed therapy (DOT) and inducements. However, when DOT fails in a few cases each year, despite intensive team effort and carrots such as housing or food vouchers, the Public Health Act may have to be invoked. We have had recourse to this measure four times in the past six months but, though dealing with an understandable breathing space, it is extremely costly and proved ineffectual as a solution each time.

Once the patient is admitted there are still potential problems. Treatment cannot be enforced and patients can abscond. There have also been instances of patients assaulting staff, physically and sexually, issuing death threats, breaking hospital property, and terrifying other patients, even interfering with ongoing therapy. Dealing with such patients puts hospital staff and patients under unacceptable pressure and requires extra staffing for security purposes. NHS hospitals were not designed for, nor are they staffed adequately for, custodial purposes.

There is an urgent need to review the Public Health Act and make provisions for small specialist units staffed by nurses with training in an aptitude for inter-personal skills. Admission to the unit would usually only be required for short periods of time until precipitating circumstances were resolved and alternative arrangements made. The threat of compulsory admission, or a short period thereof, may induce a behavioural change in the patient, allowing DOT to be successful after failing previously. In addition, a centrally based mobile unit of trained staff could be available to help tide teams over emergencies and could reduce the need for the specialist unit, enabling more non-adherent patients to be managed in the community.

We call upon the Department of Health to examine and implement these proposals.

Correspondence to: Dr C van den Bosch, CDC Team, 4th Floor, 81–91 Commercial Road, London E1 1RD, UK.

C VAN DEN BOSCH
Directorate of Public Health, East London & The City Health Authority

W WEIR
The Royal Free Hampstead NHS Trust

D O'SULLIVAN
R HEATHCOCK
Directorate of Public Health, Lambeth Southwark & Lewisham Health Authority

J STRANGeways
Directorate of Public Health, Ealing Hammersmith & Hounslow Health Authority

T ELLAM
Directorate of Public Health, Brent & Harrow Health Authority

C SENG
Directorate of Public Health, Brent & Harrow Health Authority


Pulsed dose oxygen delivery system

Dr Garrod and colleagues have described a pulsed flow oxygen delivery system for use during exercise by patients with chronic obstructive pulmonary disease (COPD).1 They found the device to be four times as economical as nasal cannulae for the same increase in walking distance with sensitivity of an assay capable of detecting HPV in cervical cancer is potentially misleading. Cervical cancer is not only a more cellular tumour but is known to be associated with several to hundreds of viral genomic copies per tumour cell. We therefore suggest that the specimens of Mulatero et al should be re-tested using a more sensitive methodology to establish whether their negative findings are related to technical or demographic differences.

BHARAT JASANI
Molecular Pathology & Immunocytochemistry Unit, University of Wales College of Medicine, Department of Pathology, Heath Park, Cardiff CF14 4XX, UK.


Simian virus 40 and human pleural mesothelioma

Mulatero et al1 report failure to detect Simian virus 40 (SV40) DNA in 12 British mesotheliomas. They point out that their negative results indicate that the previous positive findings are probably a consequence of PCR contamination. We listed laboratory contamination of samples as one of several possible explanations for differing results. Dr Jasani suggests that SV40 may be due to inadequate sensitivity and he states that the sensitivity of our assay, which we reported at one copy of SV40 per cell, is below the threshold for detecting SV40 in human mesotheliomas. All laboratories reject the possibility that he may be correct, but he does not identify any evidence to support his assertion. The studies which have identified SV40 in mesothelioma DNA refer, including one of which he was a co-author, did not report sensitivity of more than one copy per cell.

The multi-institutional study to which Dr Jasani refers examined only 12 cases of mesothelioma from one hospital in New York, but the samples were analysed in four laboratories including one in Finland which had previously reported negative results for SV40 in local mesotheliomas. All laboratories identified SV40 in 10 of the 12 New York cases. However, in their discussion the authors stated that the Finnish group subsequently confirmed the absence of SV40 in mesothelioma cases from Finland and speculated that this was because SV40 contaminated vaccines had not been used in Finland. This evidence points to demographic differences rather than lack of sensitivity as a more likely explanation for differing results from different series. It appears from the collective results of various studies that the prevalence of SV40 in mesothelioma may be greater in the USA than in Europe, possibly as a consequence of
Cystic fibrosis and diabetes

Yung et al present important data on cystic fibrosis related diabetes (CFRD) and suggest a selective approach for screening and diagnosis. 1 Although the majority of patients with CFRD may be identified using this approach, over 8% would remain undiagnosed. CFRD is associated with substantial morbidity and mortality. Analysis of 21,000 patients followed by the Cystic Fibrosis Foundation Registry shows a sixfold increase in mortality for CFRD with more severe pulmonary disease. 2 Once insulin treatment begins, FEV1, and FVC increase and are comparable to non-diabetic patients. Cystic fibrosis is associated with a deterioration of clinical status remains unresolved. The evidence in the literature on this issue is conflicting. 3 CFRD may cause a decline in patients’ clinical status or it may merely be a marker of poor clinical and nutritional status. The latter may explain the apparent high mortality of CFRD patients as reported by the Cystic Fibrosis Foundation. In the management of patients with CFRD, every effort should continue to be made to improve the clinical and nutritional status of patients so that the impact of the development of CFRD is kept to a minimum.

Bernard Yung
Department of Thoracic Medicine,
Barnet, Herts EN5 3DJ, UK


Methacholine challenge and sputum induction

Spanevello and colleagues claim that a methacholine inhalation challenge carried out one hour before sputum induction would in patients with stable asthma does not significantly alter the cellular, eosinophilic cationic protein (ECP), or albumin constituents of sputum. 1 These results, if correct, are important for both clinical practice and clinical trials where information regarding airway hyperresponsiveness and inflammation is needed. Being able to perform a methacholine challenge and sputum induction on the same day would be very convenient.

Sixteen subjects with asthma were studied on two days within a week. Sputum induction was performed alone on one day and one hour after a methacholine challenge on the other. Cell counts and the biochemical constituents of the two sputum samples were compared using the Wilcoxon signed rank test and a value of p<0.05 was considered statistically significant.

The small sample size, variability in the data, and p values near significance for neutrophils (p = 0.06) and macrophages (p = 0.08) led us to determine the power of the study. The results of a power analysis for paired continuous data showed that the study only had a 36%, 29%, 10%, 6.6%, and 19.5% chance of detecting a difference for macrophage, neutrophil, eosinophil, lymphocyte and epithelial cell counts, respectively, and 6.0% and 15.3% for ECP and albumin. Hence, while methacholine may not influence sputum cell counts, this study is too underpowered to reach this conclusion.


Acronyms
I write to protest against the use of unexplained acronyms in your editorial entitled “EUROSCOP, ISOLDE and the Copenhagen City Lung Study”. Acronyms are useful and often necessary because they simplify and accelerate modern communication. 2 But when first mentioned in any biomedical journals, acronyms must be explained fully. 3 Furthermore, abbreviations are prohibited in a title. 4 Specialists often take for granted that certain “trade terms” are so evident that they do not bother to define them. I thought that certain acronyms used in our recent article 5 were not obvious to all readers of the Journal, and I would like to make two points in response. Firstly, I agree entirely with Drs Pirزادa and Wales for their interest in our paper and would like to make two points in response. Firstly, I agree entirely with Drs Pirزادa and Wales that the oral glucose tolerance test is the test of choice in the diagnosis of cystic fibrosis related diabetes (CFRD). The selective use of OGTT in the diagnosis of CFRD as described by us may indeed miss a few cases of CFRD, but it represents an alternative approach to the diagnosis of CFRD in large cystic fibrosis centres where it may not be practical to perform OGTTs in all patients. As stated in our paper, patients with CFRD missed by our selective approach are those with normal random blood glucose levels, glycosylated haemoglobin, and those asymptomatic of hyperglycaemia. We speculate that the clinical and metabolic consequences of their diabetes may not be as great as those diabetic with one or more of the abnormal criteria cited above. As such adult patients are reviewed at least three monthly, these patients are likely to be identified at a later date.

Secondly, whether the development of CFRD is associated with a deterioration of clinical status remains unresolved. The evidence in the literature on this issue is conflicting. 3 CFRD may cause a decline in patients’ clinical status or it may merely be a marker of poor clinical and nutritional status. The latter may explain the apparent high mortality of CFRD patients as reported by the Cystic Fibrosis Foundation. In the management of patients with CFRD, every effort should continue to be made to improve the clinical and nutritional status of patients so that the impact of the development of CFRD is kept to a minimum.

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rhDNase in cystic fibrosis

Cystic fibrosis is a disease that is relatively rare but expensive for patients, families, and carers. The introduction of rhDNase has been associated with controversy as to its benefits and costs. Milla describes the experience in a centre that prescribed this drug to patients, 60% of whom had an FEV1 of more than 80% predicted at the time of prescription. Overall, the group had an accelerated decline in lung function following its introduction. This study illustrates the importance of patient selection and follow up in the prescription of rhDNase.

Paediatricians and chest physicians from the South & West Region of the UK have audited their use of DNase as part of their contribution to the South & West Cystic Fibrosis database. In 1995 78 (12%) of the 664 patients receiving care within the region had been prescribed DNase. This had risen to 143 (22%) in 1996. We subsequently defined criteria for its use: patients over five years of age, FEV1 <70% predicted, and more than one course of intravenous antibiotics during the previous year. In 1995 12 (17%) of patients receiving DNase did not appear to meet these clinical criteria. A further 36 patients who were eligible under these criteria were not receiving the drug.

Innes’ rightly emphasises the responsibility of carers to target this treatment effectively—it is also important that treatment is seen to be equitable and not dependent on postcode. Our experience illustrates that a regional cystic fibrosis database can be a clinically relevant and cost effective device for targeting appropriate treatment. The annual cost of DNase for two patients would be sufficient to fund a regional audit to monitor and influence this and other expensive treatments in patients with cystic fibrosis.

J C TYRRELL
P A LEWIS
School of Postgraduate Medicine,
University of Bath, Bath, Somerset BA2 7AY, UK

C D SHELDON
Department of Respiratory Medicine,
Royal Devon & Exeter Hospital,
Exeter, Devon EX2 5DW, UK

G CONNETT
Paediatric Medical Unit,
Southampton General Hospital,
Southampton SO16 6YD, UK
(on behalf of the South & West CF Group)

NOTICE

MICRO 2000

Following the success of MICRO 98, the Royal Microscopical Society has announced that a MICRO 2000 international microscopy exhibition and conference will be held on 11–13 April 2000 in London. Further information will be available shortly from the Exhibition Organiser, Royal Microscopical Society, 37/38 St Clements, Oxford OX4 1AJ, UK. e-mail: exhibitions@rms.org.uk
Pulsed dose oxygen delivery system

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