Being positive about the smear

At several points in the recently published Code of Practice 2000,1 dealing with the control and prevention of tuberculosis in the UK, a number of important actions and decisions turn on the results of sputum microscopy for acid-fast bacilli (the “smear”). This simple, cheap, and rapid test is used to assess sputum infectivity and prompts decisions on isolation, initiation of treatment, and the need for and extent of contact tracing. It is also the major criterion used to assess specimen priority for advanced testing, including polymerase chain reaction (PCR) and automated liquid culture.2

However, this procedure is unstandardised and smear positivity relative to culture varies from 60% to over 80%. Ziehl-Neelsen staining continues as a primary screen despite good evidence that auramine-based methods are more sensitive and quicker.3 Processing of sputum before staining may or may not involve digestion and/or concentration by sedimentation or centrifugation, despite advice and evidence that both improve the results.4 Quality control schemes assess the ability to stain and microscopically examine suspensions of mycobacteria, but not the critical issue of specimen processing before staining.

Less sensitive smear techniques may cause delays in the recognition and management of the index case, including the use of isolation facilities, and an unjustified view of low infectivity which will persist even after the culture is positive. Casual, particularly occupational, contacts of such patients will be at a significant disadvantage. Suboptimal smear techniques will also mean that some specimens merit examination by enhanced methods will not be sent for such examination. The potential benefits of the Mycobacterium tuberculosis PCR will be unnecessarily compromised.

It is now nearly 120 years since Ehrlich first described the acid fastness of some organisms, including mycobacteria. We think it is time to critically exploit his discovery.

R FREEMAN
Northern Regional Centre for Mycobacteriology, Newcastle Public Health Laboratory, Newcastle upon Tyne NE4 6BH, UK

B WATT
Scottish Mycobacteria Reference Laboratory, Croydon Hospital, Edinburgh EH10 5SB, UK


Churg-Strauss syndrome with montelukast

The case report by Tuggey and Hosker1 is similar to many of the cases of Churg-Strauss syndrome (CSS) which we have reported in association with zafirlukast,2 montelukast,3 and fluticasone/salmeterol.4 It also shares many similarities with the reports of CSS with inhaled steroid monotherapy.5

While a temporal relationship with the use of leukotriene modifiers being reported with increased frequency in association with CSS, a review of this case and others in the literature does not suggest a direct causal relationship with the leukotriene modifiers. Rather, two pathogenic mechanisms seem to predominate. In the first, CSS develops following steroid withdrawal as a result of, or concomitant with, leukotriene modifier use in patients who probably had what was perceived to be severe asthma but was likely to have been CSS masked by steroids (forme fruste CSS).6 A second mechanism is typified by patients not tapered from systemic steroids. These patients, of which the patient in this case report seems to be an example, have worsening underlying asthma symptoms as the heralding sign of incipient CSS. While, in the past, systemic steroids would have been used to treat this worsening prodromal allergic asthma phase, the recent availability of high-dose inhaled steroid therapy and leukotriene modifiers has led to a decrease or delay in systemic steroid prescription for these patients. When this inhaled steroid may temporarily initially mask the syndrome due to adequate systemic absorption or local airway effects, as the disease progresses they may not have the potency to combat this systemic vasculitis—what are often not enough and other cytotoxic agents are required. Similarly, leukotriene modifiers may initially be added in lieu of steroids for treatment of signs of airway obstruction as the disease is not requir ed as CSS. To date, all cases in the literature of CSS in association with asthma treatment fulfill one of these scenarios. The coincidental institution of these treatments near the time of worsening of the syndrome does not imply causality; rather, these new drugs seem to be unmasking the syndrome and showing that this disease is not as rare as was once perceived. While not all severe asthma is CSS, physicians should recognize worsening asthma in the setting of increased steroid therapy as a potential heralding sign of CSS and look for other vasculitic sequelae.

MICHAEL WECHSLER
Pulmonary and Critical Care Division, Brigham & Women’s Hospital, Harvard Medical School, Boston, MA 02115, USA


Malignant mesothelioma

We wish to suggest a minor correction to the otherwise excellent editorial by Drs Steele and Rudd in your recent issue.1 The status of the forthcoming British Thoracic Society study of the management of malignant mesothelioma is that this study is being supported by the British Thoracic Society and the pilot study is being assisted by the Clinical Trials Unit of the Medical Research Council. Funding for the study is being obtained through the BTS Scientific Committee and from two independent mesothelioma charities—The June Hancock Mesothelioma Research Fund and the Anthony Farmer Mesothelioma Research Fund.

We have approached the Medical Research Council with a bid for full funding of the final study but the outcome of the application is not yet known.

MARTIN F MUERS
Department of Respiratory Medicine, Leeds General Infirmary, Leeds LS9 7TF, UK

DAVID J GIRLING
MRC Clinical Trials Unit, 222 Euston Road, London NW1 2DA, UK


Assisted discharge for patients with exacerbations of COPD

We read with interest the recent papers2,3 which report the findings of randomised controlled trials of early supported discharge for patients with exacerbations of chronic obstructive pulmonary disease (COPD). Both
found that a proportion of such patients presenting to hospital could be safely cared for at home with respiratory nurse support, without adversely affecting mortality or readmission rates.

A similar service to those described operated in the first time in Sheffield, in the winter of 1997/8, supported by government money to ease the demand for beds during the winter. Although this did not involve randomisation, our findings were essentially similar. Unselected patients with exacerbations referred by general practitioners for admission to hospital were reviewed and those fulfilling the British Thoracic Society guidelines were offered home treatment. Over a 4 month period 29 of 118 patients (25%) referred were found to be suitable for supported discharge, and we successfully treated the 22 patients who consented to participate. Although there was only a small number of patients, there were no readmissions and no home deaths. The remaining 89 patients required admission because of respiratory complications (21 acute, 10 pneumonia, seven both) or coexisting medical conditions (17 cardiovascular, 28 other).

We also found that a proportion of suitable patients (seven of 29) did not want to participate in the home treatment scheme. Some of these simply wanted the reassurance of being in hospital, but two patients declined as they would have lost insurance scheme benefits. This is home treatment because they wished the

In summary, our experience supports the findings of Skwarska et al. that plans for future assisted discharge schemes should be based on an estimated discharge rate of 20–25% of unselected COPD patients referred. We too have found that such patients can be safely treated at home, and that this is acceptable to most patients. We would welcome correspondence from the authors as to whether they encountered problems with non-participation due to insurance schemes and, if so, how they addressed them.


AUTHORS' REPLY We note that Dr Barber and colleagues have used an Acute Respiratory Assessment Service (ARAS) with winter bed money and have had similar results to ours and those of Skwarska et al. in Edinburgh. We would like to comment on the proportion of patients referred for admission who are likely to be eligible for this model of care. Dr Barber’s group found that 25% were suitable for supported discharge. In the Edinburgh study 29% were initially considered suitable for home care and in the study recently published from Liverpool 33% were eligible. However, in our study in Glasgow 42% were considered eligible for early supported discharge and this difference may reflect the time when the patients are assessed. In Edinburgh and Liverpool assessment was done on the same day as the patients were referred, whereas in our study the patients were assessed on the day after admission. Clinical improvement and increase in forced expiratory volume in one second (FEV1) are maximal in the first 24 hours after admission and this may account for the higher FEV1 values and also for the greater eligibility for home care in the Glasgow patients. We now believe that the ARAS model is best employed by assessing patients after 24 hours in hospital. This allows more effective and increases the number of patients suitable for home care.

We were interested that two patients in Sheffield did not want to participate in the home treatment scheme. They wished to have lost insurance scheme benefits. This is home treatment because they wished the

This perhaps reflects a difference in health care funding between Scotland and England.

W MACNEE
Respiratory Medicine Unit,
ELEG1, Colt Research Laboratories,
Medical School,
Edinburgh EH8 9AG, UK
w.macnee@ed.ac.uk

BOOK REVIEW


This popular radiology text is now in its third edition. The challenge for the authors to contain so much information within just over 1000 pages has been successfully met.

The early chapters on plain radiographs are excellent building blocks for any trainee. The growing dependence on high resolution computed tomography (CT) is reflected in several chapters, but this is not at the expense of the plain radiograph. The value of positron emission tomography and magnetic resonance in problem solving are evaluated. CT pulmonary angiography is presented and compared with radionuclide imaging and invasive angiography.

Chapters are written from the viewpoints of both pathological location and aetiology. Where the less usual pathologies are discussed—for example, immunologically mediated, drug induced, and transplant related problems—or the more esoteric diseases are described, additional valuable clinical comments are given.

This book can be read from cover to cover; the clarity of the writing and the good illustrations help the pages to fly by. A major strength is that it can be used to help solve those perplexing cases. The index is written with a clear problem orientated approach, but do remember that the spellings are American.

This multi-modality, multi-subspecialty imaging reference text has been updated. Intended not just for radiologists, our medi-
cal, surgical, and allied professional colleagues would be wise to sequester it in their libraries. The illustrations are beautiful, the text is clear, and the references are weighty.—KP
Assisted discharge for patients with exacerbations of COPD

C M BARBER, L M BRADSHAW, P BUTTERY, D FISHWICK, M K WHYTE and T W HIGENBOTTAM

Thorax 2001 56: 417
doi: 10.1136/thorax.56.5.417c

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