

drug. We consider that this leaves insufficient time for reliable identification of the offending drug or drugs. We agree that the drugs should probably be re-introduced in this order.

A further difficult problem is the re-introduction of chemotherapy after an episode of acute liver failure. Certainly it is our policy, as discussed by Mitchell *et al.*¹ to change to drugs with no history of hepatotoxicity in patients fortunate enough to have survived this complication.

J DEVLIN
Institute of Liver Studies
D C S HUTCHISON
Department of Respiratory Medicine
S FITT
J WENDON
R WILLIAMS
Institute of Liver Studies,
King's College School of Medicine and Dentistry,
London SE5 9P7, UK

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- 2 Moulding TS, Redeker AG, Kanel GC. Twenty isoniazid-associated deaths in one state. *Am Rev Respir Dis* 1989;140:700-5.
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AUTHORS' REPLY The editorial set out recommendations on the management of hepatic reactions after due consideration of both the risks of tuberculosis itself and the risk from the drug treatment. There have been 45 deaths from liver reactions to currently recommended first-line antituberculosis drugs since 1963, with isoniazid implicated in a maximum of 25 of these. Over the same period of time there have been 272 000 notified cases of tuberculosis (all forms), with pulmonary disease – which makes up the majority of cases – carrying an overall mortality of some 5%. The most recently published annual infectious disease statistics show 418 deaths from tuberculosis in 1994,¹ and the level of tuberculosis deaths has been at that level for the last five years, and substantially higher in the earlier part of the period 1963-94. The risk of dying from tuberculosis is therefore clearly at least 200 times higher than that of a fatal hepatic reaction from the treatment, and inadequate treatment must intuitively raise the mortality of the disease still further.

We would agree that cases of hepatotoxic reactions may arise from inadequate clinical monitoring and particularly from failure to modify or to discontinue treatment when clinical and biochemical abnormalities have appeared. This makes it even more important that all cases of tuberculosis are under the care of physicians trained in its management, and with recommended dosages and durations of drugs.² In the paper by Mitchell *et al.* from the King's unit referred to by Devlin and colleagues no dosages, drug durations, or patient weights were given, so it was not shown that correct management led to the problems reported.

Devlin *et al.* accept that their recommendations that chemotherapy be withdrawn if liver transaminase activity reaches three times normal is not based on firm data. The suggestion that isoniazid at least should be withdrawn at this level does not seem logical. A large, mainly prospective, study of reactions to antituberculosis treatment

showed that the incidence of hepatotoxic reactions was lowest to isoniazid at 0.3%, being appreciably higher to pyrazinamide (1.25%) and rifampicin (1.4%).³

The essential difference between Devlin *et al.* and our editorial is the "balance point" between the risks of treatment and the risks of the underlying disease. To have a level of transaminases of three times normal for modification of treatment may well be unduly harsh. Some patients with such pretreatment levels of transaminases as a result of extensive or disseminated tuberculosis who already face a significant mortality would be denied the most effective antituberculosis drugs, thus increasing further their mortality from the disease. The emergence of multiple drug resistant tuberculosis, which is often due to inadequate treatment and compliance monitoring, is a further reason why standard chemotherapy should not be altered without strong justification.

PETER ORMEROD
Chest Clinic,
Blackburn Royal Infirmary,
Blackburn,
Lancashire BB2 3LR, UK

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Pneumomediastinum following Politzer's manoeuvre

The report by Dr Torres-Melero and co-authors of a case of pneumomediastinum following the use of a high speed air turbine drill during a dental extraction (March 1996; 51:339-40) contains some interesting points about iatrogenic pneumomediastinum.

A 35 year old man was recently admitted as an emergency to our department with acute severe neck and retrosternal pain, dyspnoea, vomiting, and agitation. These symptoms suddenly appeared during Politzer's manoeuvre carried out for the treatment of acoustic problems. Clinical examination showed subcutaneous emphysema in the neck and anterior chest wall with swelling around the eyes and over the cheeks. The patient had no pre-existing lung disease. Blood pressure and pulse, laboratory tests, electrocardiography and arterial blood gas tensions were normal. Chest radiography showed pneumomediastinum, bilateral apical pneumothorax, and subcutaneous emphysema. A large quantity of air was noted in the gastrointestinal tract on the abdominal radiograph. A computed tomographic scan confirmed the presence of air in the soft tissues of the neck, extending through the mediastinum to the diaphragm, with detachment of the mediastinal pleura and the apical parietal pleura bilaterally. The lungs were not collapsed. An oesophageal contrast study was performed to exclude any lesions in the digestive tract; no abnormalities were noted. Fiberoptic endoscopy found no lesions in the mucosa of the rhinopharynx. The patient was treated

conservatively and his clinical condition improved within 48 hours; he was discharged well six days after admission. A follow up chest radiograph 15 days after discharge showed almost complete disappearance of the air collection.

Our case has to be considered as another cause of iatrogenic pneumomediastinum and should be added to the others previously described.¹⁻³

The Politzer's manoeuvre is a method of restoring the patency of the tubes in middle ear diseases. The aim of the technique is to balance the atmospheric pressure and the pressure inside the eustachian tube by insufflating air through the rhinopharynx with a closed epiglottis. Air can be insufflated manually with a pearpush or mechanically with a conveniently balanced compressor (usually no more than 2000 millibar). Although the exact mechanism of entry of air was not found in our patient, it is likely that malfunction of the machine (or an inappropriate use of the equipment) allowed the output of air at high pressure which diffused down the fascial planes to the mediastinum and to the soft tissues of the neck through a small laceration of the rhinopharyngeal mucosa. This suspicion was confirmed by the massive quantity of air in the digestive tract and in the anterior extrapleural space.

Pneumomediastinum must be considered as a rare complication of the use of a jet of compressed air from different medical instruments.

PAOLO CARBOGNANI
PIERGIORGIO SOLLI
MICHELE RUSCA
LORENZO SPAGGIARI
LEONARDO CATTELANI
Department of Thoracic and Vascular Surgery,
University of Parma, 43100 Parma, Italy

FABIO PIAZZA
Department of Otolaryngology,
University of Parma, 43100 Parma, Italy

PAOLO BOBBIO
Department of Thoracic and Vascular Surgery,
University of Parma, 43100 Parma, Italy

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- 2 Lee HC, Dewan N, Crosby L. Subcutaneous emphysema, pneumomediastinum and potentially life-threatening tension pneumothorax. *Chest* 1992;101:1265-7.
- 3 Kern C, Tassonyi E. Pneumomediastinum due to the use of a jet of compressed air. *Can J Anaesth* 1989;36:78-80.

BOOK REVIEWS

Pulmonary Circulation – A Handbook for Clinicians. A J Peacock. (Pp 508; £95.00). London: Chapman & Hall, 1996. 0 412 56870 5.

This volume of over 500 pages pulls together many different strands of the anatomy, physiology, and therapeutics of the pulmonary circulation and its disorders. It is particularly strong in the evaluation of the pulmonary circulation in special environments and includes chapters by Jack Reeves on high altitude and high altitude pulmonary