

E.M.A.S. may therefore be right to encourage its employment medical advisers to take the diploma in occupational health "even though they may be highly experienced in the discipline," because it is an unfortunate fact that diplomas carry considerable weight in British medicine, even though their multiplicity has often raised a wry smile in professional circles abroad. But what may be more than a passport to respectability is the institution of training courses within the E.M.A.S. for its members and candidates who want to join it. These are to give due emphasis to epidemiology and statistics, which must have an important place in the studies of health hazards that the service is committed to carrying out. As an initiator of research, store of information, and adviser on environmental hazards the E.M.A.S. is covering a range of occupational risks from deep-sea diving to the manufacturing of asbestos. Among these is a study of mortality and morbidity among workers fabricating articles from polyvinyl chloride, which is suspected of being linked in some way with angiosarcoma of the liver.³

Of 143 cases of notifiable industrial diseases in 1974 75% were accounted for by lead poisoning or chrome ulceration. The total was 28% less than the figure of 214 in 1973, and a reduction in the number of notified gassing accidents from 274 to 268 was also recorded for those two years. These are obviously satisfactory trends but too much should not be read into them. Innovation of techniques and materials means ever fresh hazards, and the E.M.A.S. has an essential task in its pursuit of them.

¹ Employment Medical Advisory Service, *A Report of the Work of the Service for 1973 and 1974*. London, H.M.S.O., 1975.

² *British Medical Journal*, 1973, 1, 250.

³ *British Medical Journal*, 1974, 4, 486.

New Measures for Bleeding Oesophageal Varices

The mortality from upper gastrointestinal haemorrhage in cirrhotic patients with oesophageal varices is high—from 25% to 54% in two British series.^{1 2} The widespread use of emergency upper gastrointestinal endoscopy in the investigation of bleeding in cirrhotic patients has made it apparent that varices, even when present, are not always the source of bleeding. For example, in a recent British series³ of 50 patients with oesophageal varices who were endoscoped within 24 hours of a major haemorrhage a bleeding site was identified in 42 patients, but in only 19 of these were the oesophageal varices the source. Gastric varices were bleeding in 11 patients, and a variety of acute and chronic lesions made up the remainder. Clearly emergency endoscopy should be carried out during each episode of bleeding, for treatment can be planned and assessed rationally only if the site of haemorrhage is known.

Blood replacement and urgent arrest of the haemorrhage are the main priorities in treatment. A wide range of medical and surgical measures have been tried to control variceal haemorrhage,⁴ and recently there has been interest in the value of infusions of vasopressin into the superior mesenteric artery. This therapy, which was first introduced in 1967 by Nusbaum⁵ in an attempt to reduce the serious side effects of systemic therapy, has recently been compared with conventional therapy in a prospective trial by Conn and his colleagues⁶ in 60 episodes of upper gastrointestinal haemorrhage, of which 33 were thought to be due to bleeding varices. They found that intra-

arterial vasopressin was more effective in controlling haemorrhage from both variceal and non-variceal sites than conventional therapy and that blood transfusion requirements were reduced. However, survival was not prolonged, and there was a high incidence of rebleeding and complications of therapy in the vasopressin group, observations which confirm the conclusions of an uncontrolled British study.⁷ As Conn *et al.* did not use the Sengstaken tube as part of their conventional therapy for bleeding varices some of their conclusions may be misleading, and what is needed now is the result of a further trial comparing intra-arterial vasopressin with the Sengstaken tube. At present in most centres in Britain the Sengstaken tube is used as the first line treatment for bleeding oesophageal varices: recent reports attest to its effectiveness and safety in experienced hands, provided that certain precautions are taken.^{8 9} There is no evidence yet to recommend abandoning the Sengstaken tube in favour of intra-arterial vasopressin, though the latter may have a role in controlling haemorrhage from gastric varices and gastric erosions, where balloon compression is usually impossible.

Haemorrhage recurs in a high percentage of patients shortly after stopping the vasopressin infusion or deflating the oesophageal balloon, and more permanent surgical measures are usually urgently required. These procedures were reviewed¹⁰ in 1971, and until recently the choice lay between some form of emergency portal decompression procedure and direct occlusion of the varices at thoracotomy. Both procedures usually control the bleeding, but they carry a high mortality,¹¹⁻¹³ for these patients are bad operative risks and readily develop hepatic and renal failure. Injection sclerotherapy of bleeding oesophageal varices, first introduced in 1939, has the attraction of being a lesser surgical procedure. Though encouraging results have been reported from a few centres,¹⁴⁻¹⁶ the technique has only recently been more widely adopted. It may also be repeated at intervals in an attempt to prevent further episodes of haemorrhage; this approach may prove more successful than therapeutic portacaval shunt, which in four recent controlled trials was shown not to prolong the survival of these patients.¹⁷ Bleeding was largely prevented, but there was a high incidence of severe portal-systemic encephalopathy and hepatic failure. Various modifications of the operation to reduce the degree of shunting and maintain liver blood flow are currently being assessed.

Clearly clinicians are still dissatisfied with their management of bleeding oesophageal varices, but the role of the various available procedures is now being clarified by some well-conducted prospective trials.

¹ Read, A. E., *British Medical Journal*, 1968, 1, 427.

² Hislop, I. G., *et al.*, *Lancet*, 1966, 1, 945.

³ Waldram, R., *et al.*, *British Medical Journal*, 1974, 4, 94.

⁴ Orloff, M. J., *Current Problems in Surgery*, July 1966, 13.

⁵ Nusbaum, M., *et al.*, *Surgery*, 1967, 62, 299.

⁶ Conn, H. O., *et al.*, *Gastroenterology*, 1975, 68, 211.

⁷ Murray-Lyon, I. M., *et al.*, *Gut*, 1973, 14, 59.

⁸ Pitcher, J. L., *Gastroenterology*, 1971, 61, 291.

⁹ Hermann, R. E., and Traul, D., *Surgery, Gynecology and Obstetrics*, 1970, 130, 879.

¹⁰ *British Medical Journal*, 1971, 1, 418.

¹¹ Conn, H. O., in *The Liver and its Diseases*, ed. F. Schaffner, S. Sherlock, and C. M. Leevy, p. 289. New York, Intercontinental Medical Book Corporation, 1974.

¹² Rothwell-Jackson, R. L., and Hunt, A. H., *British Journal of Surgery*, 1971, 58, 205.

¹³ Pugh, R. N. H., *et al.*, *British Journal of Surgery*, 1973, 60, 646.

¹⁴ Hunt, P. S., Johnston, G. W., and Rodgers, H. W., *British Journal of Surgery*, 1969, 56, 305.

¹⁵ Denck, H., *Journal of Cardiovascular Surgery*, 1971, 12, 146.

¹⁶ Kapp, F., and Buess, H. J., *Deutsche medizinische Wochenschrift*, 1973, 98, 2465.

¹⁷ Conn, H. O., *Gastroenterology*, 1974, 67, 1065.