Upper gastrointestinal haemorrhage

Upper gastrointestinal haemorrhage that presents as haematemesis or melaena is potentially life-threatening and is a common cause of admission to hospital. The condition has an incidence of around one per 1000 per annum in our community and a mortality rate, in most recent studies, of approximately 10%. This mortality seems not to have altered significantly over the past few decades although, within single centres, different trends have been reported. Schiller et al. in a retrospective study found no improvement over 15 years, while our group noted a reduction in mortality from 9% to 2.4% over a period of six years after the setting up of a special haematemesis and melaena unit. Kang and Piper at The Royal North Shore Hospital of Sydney have also reported a significant improvement in mortality rates.

Recent studies from the United Kingdom have suggested that the mortality rate is higher in patients with gastric ulcer (9%) than with duodenal ulcer (5%) and is very low in those with bleeding gastric erosions (1.5%). These figures are similar to the Australian experience. Clearly, the highest mortality is found in patients who are bleeding from oesophageal varices and the mortality of the first bleeding episode ranges from 26% to 85% in published series. However, most patients who are admitted to hospital with upper gastrointestinal bleeding suffer from acute or chronic peptic ulcer disease, and it is in this area where a close audit of survival is most important.

In this issue of the Journal (page 247), Duggan compares the outcome of 568 episodes of acute upper gastrointestinal haemorrhage that were managed in the Gastroenterology (GE) Unit of The Royal Newcastle Hospital during a 10-year period from July 1, 1964 to June 30, 1974, with 523 patients who were managed in other units of the same hospital for a five-year period from 1964 to 1969. The policy of the GE Unit was that all but minor gastrointestinal bleeding was admitted to the Intensive Care Unit for joint management by gastroenterologists, intensivists and anaesthetists. A very conservative approach to blood transfusion and surgery was also practised except in patients with a confirmed gastric ulcer, in whom operation was undertaken immediately bleeding recurred.

In spite of the fact that the Unit patients were, on the whole, more ill than those who were treated elsewhere in the hospital, the mortality rates in the major diagnostic categories were lower in the former. The most impressive reduction in mortality occurred in patients with gastric ulceration (8.9% compared with 23.1%; P < 0.01). These differences were not due to differences in operative rates which were identical in the two groups. The author felt that the differences between the two groups were due to clinical judgement and to the early use of endoscopy in all patients in whom gastric ulcer was a possible diagnosis, so that surgery could be undertaken at the first sign of the recurrence of bleeding in a patient with a gastric ulcer.

The results that were obtained in the patients with peptic ulcers were then compared with those from gastrointestinal units in Melbourne and Sydney which promoted different treatment policies. That in Melbourne involved an aggressive policy of transfusion and surgery while that in Sydney used a "standard" approach. Since the mortality rates of patients with bleeding ulcers were lower than those of patients not treated in gastrointestinal units in all series, and indeed comparable with each other, Duggan concluded that the common denominator was the specialized unit that was undertaking the management of the bleeding patients. Thus, he suggested that there is a need for all large hospitals to consider setting up haematemesis and melaena units.

On that point we concur; however, we cannot agree totally with several of Duggan's other comments. Duggan believes that early endoscopy should be undertaken only in those patients in whom the bleeding lesion could be a gastric ulcer. While some studies have shown that early endoscopy did not alter mortality rates, other studies have shown that it does, so its position is still unclear. Further, he makes no mention of the "stigmata of recent haemorrhage" and the "visible vessel". Recently, Foster et al. reported that endoscopic evidence, as indicated by fresh bleeding, adherent clot in an ulcer, or a vessel seen in the base of an ulcer, was superior to any other single factor in predicting recurrence of bleeding. The prevalence of these stigmata of recent haemorrhage was considerably higher in the first 12 hours after admission to hospital compared with the second 12 hours. Independently, Griffiths et al. reported that a visible vessel in the base of an ulcer indicated an increased risk of uncontrolled or recurrent upper gastrointestinal haemorrhage. These findings suggest that patients with a visible vessel in the base of an ulcer should be considered for early surgery, thus possibly reducing mortality, since recurrent haemorrhage is associated with an increased mortality. Therefore, we feel that early endoscopy (within 12 hours of admission to hospital) has potential advantages for all patients who are bleeding, is important to identify those who are bleeding from oesophageal varices and gastric erosions since their management differs from that of patients with bleeding peptic ulcers, and ensures that an experienced clinician is involved in the patient's management from the start.

As an aside, it should be noted that the mortality rates of patients with cirrhosis of the liver were essentially the same at The Royal Newcastle Hospital whether these were managed in the GE Unit or not (57.7% and 60%, respectively). These are high mortality rates. Duggan has stated that the capacity of treatment to alter the outlook in patients with bleeding varices was debatable, and hence did not recommend that such patients should necessarily be admitted to a specialized gastrointestinal unit. By means of an aggressive transfusion policy and the use of balloon tamponade, our group has had an admission mortality of 22% (1972-1978) and 13% (1976-1978) for patients with bleeding oesophageal varices. The proportion of patients who were admitted to hospital with a diagnosis of cirrhosis was 3.3% at The Royal Newcastle Hospital, much lower than the 11% in Melbourne. There are also recent studies of the use of acute and continuing sclerotherapy for bleeding varices which suggest that these measures control bleeding and improve survival. Hence, it is our strong recommendation that all patients with haematemesis and melaena who require admission to hospital should be admitted to a specialized haematemesis and melaena unit.

What progress has been made in the last decade in the management of haematemesis and melaena? First, some haematemesis and melaena units have been set up so that patients are managed by experienced clinicians from the start, and thus mortality is reduced. Secondly, early endoscopy is being used to identify those who are bleeding from varices and to detect gastric ulcers, the signs of recent haemorrhage.
therapy can be used in the emergency and definitive management of bleeding oesophageal varices, and finally, the resuscitation of patients with oesophageal varices. 

Further improvements in mortality rates may be achieved by new techniques to control and minimize the recurrence of bleeding — the heater probe, the laser, the endoscopic sewing machine and the infusion of somatostatin; by reducing postoperative mortality in the elderly; and by the improved management of patients with oesophageal varices.

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