to use local anaesthetic spray to the throat. If the patient requests sedation or if terrified a titrated dose of midazolam is given. Endoscopy without sedation is successfully practised by my registrars and has the advantage that it is possible to talk to the patients immediately after the endoscopy, and they are allowed home within the hour.

There have been no deaths or major injuries on my unit relating to patients undergoing upper gastrointestinal endoscopy since 1976. It is my impression that, apart from patient safety, instruments get damaged less. Keeping the patient's conscious cooperation by sympathetically talking the instrument down also protects the endoscope. Many of my patients come back for several repeat endoscopies.

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Reply

SIR,—Mr Kingston and Drs Clark and Goy suggest contrasting means of improving the safety of endoscopy. While most would agree that the option of not using sedation should be considered more frequently, this option is clearly not possible in all patients. Nevertheless, the avoidance of sedation when possible in 'at risk' patients, such as those with acute gastrointestinal bleeding, should be encouraged.

From our experience the 'interventionist' approach of intensive monitoring and oxygen supplements is not yet likely to find favour among most British gastroenterologists. These interventions all have opportunity costs both in resources and time and, until there is some evidence of their being both effective and appropriately applied to 'at risk' groups, then recommendations as to their routine use seem premature. Indeed, is there evidence that patients having routine upper endoscopies with supplementary oxygen suffer significant O₂ desaturation and would therefore also need pulse oximetry?

The purpose of our survey was to make a preliminary assessment as to whether an appreciable problem existed. Our survey suggests a striking number of serious adverse outcomes occur, and studies, sponsored by the British Society of Gastroenterology, are now in progress to identify which patients are at risk and the most useful interventions.

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Palliation of malignant obstructive jaundice – surgery or stent?

SIR,—I would like to comment on Hatfield's excellent brief leader (*Gut* 1990; 31: 1339–40). Although he was reviewing methods for palliation, it might have been appropriate to mention the frequent difficulty in proving that a patient has an incurable lesion. Both histological confirmation of malignancy, and irrefutable evidence of unresectability, are sometimes hard to obtain short of operation.¹ An argument in favour of surgical palliation is that these doubts can be laid to rest; the morbidity of surgery is very low if carefully selected patients are managed by an expert surgeon and perioperative team.

The statement that 'there is little doubt that endoscopic stenting is the treatment of choice' (for hilar lesions) is provocative. Some primary bifurcation lesions are resectable² (a few even prove to be benign), and I am not convinced that percutaneous interventions are obsolete.¹ The careful randomised study by Speer *et al*³ certainly showed endoscopic stenting to be safer than percutaneous intervention at the Middlesex and London Hospitals – but those data have yet to be confirmed in other institutions. It may be that two expandable stents placed percutaneously via small transhepatic catheters would be more effective than one placed endoscopically from below; stenting both sides of a bifurcation lesion endoscopically is rarely possible. In addition, combined percutaneous-endoscopic manipulation is often necessary in managing difficult problems, as the Middlesex group have reported.⁴

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- 1 Cotton PB. Management of malignant bile duct obstruction. *Journal of Gastroenterology and Hepatology* 1990; 5: 63–77.
- 2 Boerma J. Research into the results of resection of hilar bile duct cancer. *Surgery* 1990; 108: 572–80.
- 3 Speer AG, Cotton PB, Russell RCG, *et al*. Randomised trial of endoscopic versus percutaneous stent insertion in malignant obstructive jaundice. *Lancet* 1987; i: 57–62.
- 4 Dowsett JF, Vaira D, Hatfield ARW, *et al*. Endoscopic biliary therapy using the combined percutaneous and endoscopic techniques. *Gastroenterology* 1989; 86: 1180–6.

SIR,—We read with interest the leading article in *Gut* (1990; 31: 1339–40) which discussed the relevant merits of surgical bypass and endoscopic stenting for the palliation of malignant biliary obstruction. While we would agree with Dr Hatfield that endoscopic stenting achieves good biliary decompression with a low procedure related mortality and morbidity, there are several points in his article which cannot remain unchallenged.

Firstly, we strongly contest the notion that cholangiocarcinoma of the proximal common bile duct or its confluence (Klatskin tumour) should automatically be managed by stenting. This tumour is characteristically slow growing and often metastasizes late. Because of these features surgical resection often produces good longterm palliation and occasional cure. The resection rate of hilar cholangiocarcinoma is increasing worldwide with a corresponding fall in morbidity and mortality when performed in specialist units.¹ A median survival of two years is expected, and the five year survival in recent series has reached a creditable 17%.² Quality of survival for the vast majority of these patients is excellent. Another serious consequence of stenting high biliary strictures without exploratory surgery is that the diagnosis is not proved. It has been shown that, despite sophisticated imaging techniques, the diagnosis of Klatskin tumour will be incorrect in up to 30% of cases.³ Immediate endoscopic stenting will therefore lead to the mismanagement of both benign biliary strictures and some highly curable malignant lesions, such as papillary adenocarcinoma.

With regard to low bile duct obstruction due to malignancy, two points need to be made. Firstly, the best bypass procedure is a Roux-en-Y choledochojunostomy, not the operations mentioned in Dr Hatfield's article. Moreover, the standard Whipple pancreaticoduodenectomy can be performed with an operative

mortality of less than 5%,⁴ and excellent palliation accompanies this procedure. Five year survival rates of 30% for cholangiocarcinoma and 15% for pancreatic cancer have been reported.⁴ These results far exceed the median survival of five months quoted from the Middlesex trial.

In summary, endoscopic biliary stenting is a new and exciting procedure for the palliation of malignant biliary obstruction, but its exact role has yet to be defined. We would agree with Dr Hatfield that it is the treatment of choice for the high risk surgical candidate and for patients with obvious advanced malignant or metastatic disease. Resectional surgery, however, remains superior for achieving effective longterm palliation, and appropriate patients at least deserve the opinion of a specialist surgeon before being referred for stenting. Medical nihilism should be discouraged, and physicians should remember that the decision to stent limits the patient's survival to a few months. Routine stenting, therefore, rests very uncomfortably with us.

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- 1 Cameron JL, Pitt HA, Zinner MJ, Kaufman SL, Coleman J. Management of proximal cholangiocarcinomas by surgical resection and radiotherapy. *Am J Surg* 1990; 159: 91–7.
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- 4 Michelassi F, Block GE. Improved results following radical operations for pancreatic adenocarcinoma [Abstract]. *3rd World Congress on Hepato-Pancreato-Biliary Surgery* 1990; 2 (suppl): 46. London: HPB Surgery.

Reply

SIR,—In response to the letters from Professor Peter Cotton and Messrs Russell and Rees concerning this leading article we would like to comment with particular reference to hilar and low bile duct strictures.

Hilar strictures

The evidence that cholangiocarcinoma is a uniformly slow growing tumour is at variance with our own experience¹ in a large group of over 100 patients with Klatskin tumours in whom the median survival is only 12 weeks. A few patients have prolonged survival admittedly, but such patients survive with resective surgery, radiotherapy, or stenting alone. While we agree that specialist units are necessary, it is important to note the median age of patients in the above series was 75 years, less than 15% being under the age of 60 years. The good results in Boerma's review could merely be due to patient selection and age. Probably our experience and referral pattern is different and this is an excellent example of the widely quoted 'apples and oranges' phenomenon described by Peter Cotton.²

We agree that diagnosis can be difficult, but spontaneous benign strictures in this region are extremely rare and papillary lesions are easily distinguished by their different radiological appearance. Our policy is to attempt to obtain a histological diagnosis in those patients where endoscopic retrograde cholangiopancreato-