Upper gastrointestinal endoscopy – a survey of patients' impressions

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Summary

One hundred and forty patients were followed-up within one year of upper gastrointestinal endoscopy. The incidence of disease, complications and influence of findings on treatment are outlined.

Introduction

Upper gastrointestinal fibre-optic endoscopy is well recognized as a valuable diagnostic tool in gastroenterology. It is both complementary and an alternative to radiology. It is the investigation of first choice in acute upper gastrointestinal haemorrhage and after gastric surgery. The main use is in the investigation of dyspepsia, particularly where radiology has been negative. Therefore to the clinician fibre-optic endoscopy is a valuable tool. However, its acceptability to the patient is not so well documented. The survey was to investigate the immediate and long-term consequences of this procedure and the patients' impressions of it.

Methods

A questionnaire was sent by post in January 1976 to 250 patients who had undergone endoscopy during 1975. Thirty patients had been admitted with acute gastrointestinal bleeding, but the remaining cases were examined by endoscopy either as outpatients, and were allowed to go home the same evening or, because of age, infirmity or the distance involved in travelling, were kept overnight. All patients were given a pre-medication of either injection of papaveretum (Omnopon) and scopolamine or pethidine atropine 1-2 hr before the procedure. Before endoscopy the patient's pharynx was sprayed with lidocaine. A state of light anaesthesia was induced with intravenous valium up to 20 mg/patient. The Olympus GIF-D or the JFB2 endoscopes were used. Seventy-five per cent of the procedures were performed by the consultant, 23% by a general practitioner clinical assistant who had been previously trained by the consultant, and 2% were by the registrar alone.

Results

One hundred and forty of the 250 question-

naires were returned and adequately completed. Twenty patients had died since the procedure. The remaining 90 unreturned questionnaires constituted a group of patients with similar clinical indications and findings (Table 1 and 2), therefore it was considered there was unlikely to be any bias.

The indications for endoscopy are listed in Table 1. Thirty-eight per cent were performed for dyspepsia and/or epigastric pain and 24% for acute gastrointestinal haemorrhage.

The findings from endoscopy are listed in Table 2. Thirty-seven per cent of patients had a completely normal upper gastrointestinal tract. The other main findings were gastric ulcer (19%), duodenal ulcer (11%) and gastric neoplasms (11%).

General practitioners had referred 71% of the cases, and other hospital departments, 29%. The thirty emergency cases were all examined by endoscopy within 48 hr of admission. Routine referrals from the Outpatient Department underwent endoscopy within 1 week in twenty-six cases; 1-2 weeks in forty; 2-4 weeks in twenty-seven; and more than a month later in fourteen patients. At that time the average waiting list for outpatient appointments was 2 weeks so that from seeing the general practitioner to completion of endoscopy was less than 6 weeks in most of the patients.

One hundred and twenty-eight (91%) of patients were satisfied with the instructions and explanation of the procedure which was usually given in the Outpatient Department by the consultant or in the ward immediately before it was performed. Either because no explanation had been given or the information was inadequate, 9% of patients had found the procedure different and more unpleasant than they had been led to expect. Only 11% of patients had any recall of the procedure. Of these, the majority remembered the intubation and nothing more. The following comments were made by those who recalled more of the procedure. 'I felt the tube going down and heard the doctors talking'; 'I remember feeling the tube being put into my throat and struggling'; 'Retching due to something in my throat'; 'I felt the opening of my mouth and the instrument being forced down my throat'.

TABLE 1. Indications for upper gastrointestinal endoscopy. Total number of patients investigated, deaths and return of completed questionnaire.

	Questionnaire completed	Questionnaire not returned	Deaths	Total	(%)
Acute upper gastrointestinal haemorrhage	30	23	6	59	(24)
Epigastric pain/dyspepsia	61	31	2	94	(38)
Follow-up of (doubtful) radiological findings	21	15	1	37	(15)
Follow-up of endoscopy (findings after treatment)	8	1	—	9	(4)
Vomiting	6	6	1	13	(5)
Anaemia	7	4	4	15	(6)
Weight loss/? malignancy	4	3	3	10	(4)
Obstructive jaundice	1	1	1	3	(1)
Hypocalcaemia	1	1	0	2	(1)
Epigastric mass	0	0	1	1	
Dysphagia	0	4	1	5	(2)
Alcoholic cirrhosis	0	1	0	1	
Cancerophobia	1	0	0	1	
Totals	140	90	20	250	

TABLE 2. Findings at endoscopy in 250 patients.

	Questionnaire completed	Questionnaire not returned	Deaths	Total	(%)
Completely normal upper gastrointestinal tract	51	37	4	92	(37)
Gastric ulcer	31	13	4	48	(19)
Duodenal ulcer	19	8	—	27	(11)
Neoplasm	9	8	10	27	(11)
Oesophagitis ($\pm$ hiatus hernia)	5	10	1	16	(6)
Hiatus hernia without oesophagitis	2			2	
Duodenitis	3	3	1	7	(3)
Duodenal scarring	2	1		3	(1)
Technical failure	1	3		4	(2)
Gastritis	8	4		12	(5)
Duodenal polyp	1	1		2	(1)
Gastric polyp	2	0		2	(1)
Jejunal ulcer	1			1	
Pyloric stenosis	3			3	(1)
Gastric erosion	1			1	
Oesophageal venule	1			1	
Achalasia		1		1	
Hourglass stricture of stomach		1		1	
Totals	140	90	20	250	

Following endoscopy, 46% of patients had a mild sore throat which usually wore off within 24 hr. Dizziness (24%) and headache (11%) were the two commonest complaints and these may well be due to the amount of diazepam used. Since this survey was done the policy has been to try to use even less diazepam but nevertheless to preserve the amnesic effect which is so valuable. A number of other side effects were noted by the patients, cough (13%), superficial thrombophlebitis at the site of injection of diazepam (two patients), vomiting (three patients), stiff neck (one patient), 'chest trouble' (one patient) and 'painful leg' (one patient). Thirty-eight per cent of patients had no side effects.

There were a number of major complications. One patient developed a mild hemiplegia within 2 hr of endoscopy. This patient had severe oesophagitis and a recurrent gastric ulcer due to a malignant Zollinger-Ellison pancreatic tumour. The patient recovered from hemiplegia over the next few weeks but later died of multiple metastases. One patient had a respiratory arrest while recovering on the ward, probably owing to inhalation of refluxed gastric juice, as an inhalation pneumonia developed subsequently. This resolved without complication. Three patients became anoxic during the procedure but quickly recovered with the help of oxygen. This highlights the need to do this procedure where

resuscitation and anaesthetic equipment is readily available. The most serious complication was the perforation of an oesophageal varix. The patient was successfully resuscitated and the bleeding controlled with a Senkstacken tube on that occasion, but he subsequently died of a further haematemesis and hepatic failure. The only death that could be attributed directly to the procedure was a case of ascending cholangitis with a Gram-negative septicaemia following cannulation of the ampulla of Vater in a patient with a carcinoma of the pancreas and an obstructive jaundice.

It is important that patients as well as the referring doctor should know the outcome of examination and what treatment is recommended. This information was received immediately by 27% of patients, within 1 week by 45% and the remainder were notified within 3 weeks. The problem of discussing the findings in patients soon after the procedure is that the amnesic effect of the diazepam may still be present. It became the policy to write to the patients and the doctor immediately the procedure was finished. The explanation that was given was considered to be perfectly satisfactory by 86% of patients, but inevitably some patients either misunderstood or wished for a further explanation. This was summarized in such remarks as 'Where did the ulcer go?' in a case of a gastric ulcer successfully healed after a 6-week course of carbenoxolone. 'Just told it was negative', this latter comment is probably an acceptable criticism of an inadequate explanation to someone with distressing but radiologically and endoscopically negative dyspepsia. It is now policy to add a simple explanation of the relationship of dyspepsia to stress, smoking and hyperacidity. Another comment, 'Wasn't told what caused the ulcer and inflamed oesophagus', reveals the need, in certain patients, for the explanation to be more detailed; and this should probably be done at the next out-patient visit or by the general practitioner.

Did the procedure in fact lead to any change in management?

Following endoscopy, 72 patients (51%) had fresh advice or new treatment. Of all the patients, 20% were started for the first time on a medical treatment, 43% were asked to continue their current regime which usually consisted of an alkali or carbenoxolone, 17% of patients received advice on diet and their personal habits, 20% were referred for surgery, 10% had no treatment and 1 patient was referred for radiotherapy. As a result of the investigation and advice, 90 patients (68%) said that they had improved consequently, 40 (30%) remained unchanged and 5 patients had deteriorated. Five patients failed to answer this question. At the time of the survey some 1–12 months after the procedure 71 patients

(50%) were still experiencing dyspepsia, however, despite all the advice. One hundred and twenty-five of the 140 patients had had a previous barium meal and of these, sixty-two said they preferred the endoscopic examination but twenty-eight favoured the barium meal. Twenty-three patients did not like either procedure and 12 expressed no preference. All the patients were asked if they would be willing to undergo a repeat examination and 127 said they were willing, eight said they would prefer another form of examination, probably a barium meal, and five patients did not indicate preference for either procedure.

Discussion

Cotton has suggested that panendoscopy is acceptable to most patients and that it is preferable to barium studies. If it is technically superior to radiology it should at least have an equal acceptability to the patient and, in this survey, the majority of patients expressed a preference for endoscopy. This may be because it is done in an amnesic state. An additional difference, which may well be important, is that the hospital staff made a special effort to tell the patient the findings whereas in radiology many patients failed to obtain this information for some time. Unlike radiology endoscopy does produce side effects and, although 38% of patients did not report any, the greatest problem is the sore throat that may last into the next day. There is no doubt that the blunter, forward-viewing GIF-D3 endoscope gives more discomfort than the narrower round ended JFB2. In future, more sophisticated instruments will undoubtedly alleviate these side effects. Of the other minor side effects, most seem short-lived and of no consequence. The incidence of side effects from a barium meal examination were not documented but constipation is certainly a frequent complaint especially in the elderly. The major endoscopic side effects of anoxia, hemiplegia, inhalation pneumonia and a Gram-negative septicaemic death are much more worrying.

The hemiplegia and the death associated with septicaemia both occurred in patients with malignant disease. The three anoxic episodes and the inhalation pneumonia following a brief cardiac arrest after the patient had returned to the ward, are unexplained except that the pre-medication or the diazepam dosage may have been too great. Since that experience, much more care has been taken in assessing the pre-medication dosage. The intravenous diazepam is given more slowly to the point where the patient is just drowsy, and at a time when there are rapid blinking movements. At this level the patient is still able to swallow, cough and even converse but is definitely amnesic.

It is interesting that at the time of the survey 71%

of the patients still had some dyspepsia despite various forms of treatment. The most resistant are those with negative findings for whom alkalis do not appear to give adequate relief. It is perhaps the latter that need further study, particularly to see if hyperacidity or hypermotility play some part in the symptoms and whether, therefore, cimetidine would be justified in full therapeutic doses or on a nocturnal dosage regime only.

It is clear that with such a common symptom complex as dyspepsia it is important that any investigation should yield accurate useful information which should be safe and acceptable to the patients. In this survey, findings led to active or continued treatment in all but ten patients. Endoscopy should

be and is safe but there is a slight risk of minor and major side effects, especially if sedation is excessive or intubation of the pharynx is performed roughly. It is virtually mandatory that endoscopy be carried out in a well equipped room or a theatre with anaesthetic equipment available. It certainly appears to be acceptable to the patient and in many cases is preferable to radiology. Provided the risks are kept at a low level, then it is always likely to give as good results as, if not better than, radiology, although the combined procedures are most likely to yield the maximum anatomical information.

Reference

COTTON, P.B. (1976) Upper gastrointestinal endoscopy. *British Journal of Hospital Medicine*, **16**, 7.