husbands, who probably will be of similar intelligence and will have been told about the problem before pregnancy. In view of our very limited experience of this clinical condition a well-planned prospective study should be started to recommend a sensible therapeutic approach.

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Evaluation of one-visit endoscopic clinic for patients with dyspepsia

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Summary and conclusions

An evaluation was made of the feasibility of an instant upper-gastrointestinal endoscopy clinic for patients referred to hospital for the investigation of dyspepsia. A total of 200 patients underwent endoscopy using a small-diameter endoscope with only topical pharyngeal anaesthesia but no premedication or sedation. The procedure was successful in 187 of the patients. Its acceptability was high for both patients and doctors. The average duration of the hospital visit was 45 minutes.

Instant endoscopy with a small-diameter endoscope provides a convenient and fast primary diagnostic service for patients with dyspepsia.

Introduction

Dyspepsia is common, Doll and Avery Jones in 1950[1] estimating that some 30% of the adult population will experience dyspepsia during a five-year period. Barnes *et al*[2] calculated that in a population of 300 000 (about that served by a district general hospital) 4500 people are likely to have severe dyspeptic symptoms, of whom about 2700 will have a definite lesion of the upper gastrointestinal tract. These figures indicate the magnitude of the work load in departments of gastroenterology, which investigate and treat these patients.

Several studies have shown that endoscopy is more accurate than radiology in detecting lesions of the upper alimentary tract.[3] Endoscopy is becoming generally accepted as the primary investigation of dyspepsia. Most patients referred to hospital for investigation of dyspepsia are first seen in an outpatient clinic. Endoscopy is usually performed during a subsequent visit, usually entailing admission as a day case and sedation with intravenous diazepam. After endoscopy the patient is often followed up. This approach has several disadvantages: several hospital visits are necessary with consequent inconvenience to the patient, who also loses more than one working day; and drowsiness after intravenous sedation requires a period of recovery in a hospital bed after the test, and the patient should not drive or operate dangerous machinery for 24 hours. Many patients are unable to remember what the doctor told them after receiving intravenous diazepam. In addition, as each patient is seen several times, a backlog tends to develop.

If endoscopy without intravenous sedation using the small-diameter endoscopes such as the Olympus GIF P2 were acceptable to patients and if adequate examination of the oesophagus, stomach, and duodenum could be carried out under such circumstances, this procedure would considerably diminish the consumption of hospital resources. Thus patients referred with dyspepsia could be seen and examined and endoscopy carried out at only one visit, and treatment could be started immediately. Many patients would need only one visit to the hospital and could be immediately referred back to their own general practitioner. We have evaluated this approach to diagnostic endoscopic examination of the upper alimentary tract in patients with dyspepsia with respect to its feasibility, organisation, acceptability to the patient, and success rate.

Patients and methods

All the patients included in this study were consecutively referred by practitioners for investigation of dyspepsia. They were sent an appointment for a one-visit upper gastrointestinal investigation clinic. The letter contained the time of the appointment, a short explanation of the clinic arrangements, a simple description of endoscopy, and a request to attend fasting. Patients seen at morning clinics fasted from the previous evening, while those seen in the afternoon had only a light breakfast on the day of the appointment. The clinics were conducted by two doctors and an endoscopy nurse. Each patient was seen by one of the doctors, who took a full history and performed a physical examination. Blood for laboratory investigations was taken at this stage, and the doctor then decided whether endoscopy was indicated. The endoscopy was done by the same doctor, the patient

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receiving local pharyngeal anaesthesia with lignocaine (4% Xylocaine gargle) but no other sedation. The two doctors worked an overlapping system, one carrying out endoscopy while the other took the history and examined the next patient. The patients were told the results of the endoscopy immediately after the procedure. A standard letter describing the findings and suggesting treatment was posted to the referring doctor the same day. Patients in whom endoscopy was not indicated were referred for the appropriate investigations.

After endoscopy all patients were asked to assess the procedure on a verbal scale describing it as mildly unpleasant, unpleasant, very unpleasant, or unbearable. They also completed a visual analogue scale consisting of a 10 cm line ranging from "mildly unpleasant" (0 cm) to "unbearable" (10 cm). They were also asked whether they would be willing to undergo the procedure again. Patients who failed to swallow the endoscope without intravenous sedation were regarded as failed endoscopies. Each endoscopy was also scored by the doctor on a visual analogue scale ranging from "easy" (0 cm) to "impossible" (10 cm). All patients also underwent a barium-meal examination, which was assessed in the same way as the endoscopy. Afterwards, the patients were asked to state their preference between the two tests.

Results

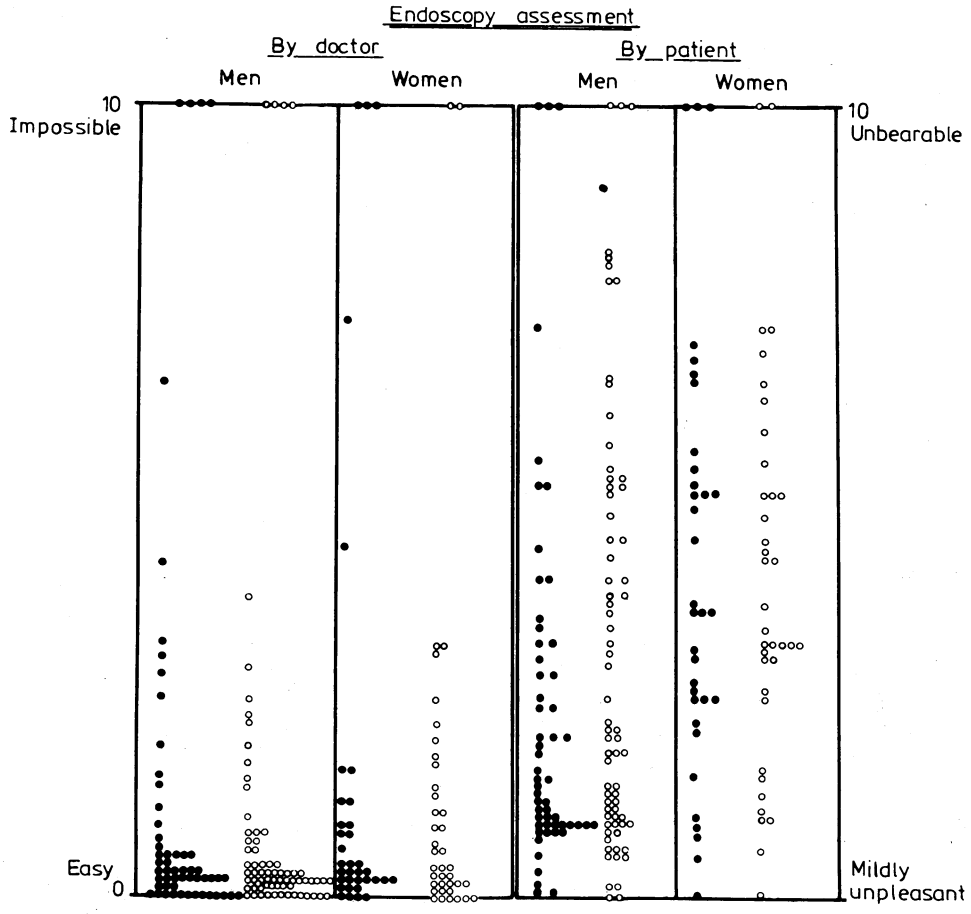
During the period of study (July 1977 to February 1978) 205 patients were seen in the clinic. In five endoscopy was not indicated, so that analysis of the procedure was based on the remaining 200 patients (126 men and 74 women). Seventy of the men and 39 of the women were aged under 45 years. Endoscopy was unsuccessful in 13 of the patients, in two due to technical problems with the endoscope and in 11 because they could not tolerate the procedure.

Table I shows that results were normal in only 56 (30%) of the patients in whom the procedure was successful. Of these, 24 were investigated, but pathological abnormality was found in only seven, two of whom had cholelithiasis and eventually underwent cholecystectomy. Eleven patients had gastric ulcers, which were benign on histological and cytological examination. Fifty patients (27%) had evidence of past or present duodenal peptic disease: 10 had frank ulcers, three pyloric stenosis, and 37 scarring of the duodenal cap. One patient with a Billroth I gastrectomy had a stomal ulcer. Five patients underwent surgery as a direct result of endoscopic diagnosis of gastric cancer (two) or pyloric stenosis (three).

TABLE I—*Endoscopic findings in 200 patients with dyspepsia. (In some patients more than one abnormality was recorded)*

No of successful endoscopies	187
Diagnosis:	
Normal	56
Oesophagitis	33
Hiatus hernia	15
Gastritis	43
Gastric ulcer	11
Gastric carcinoma	2
Pyloric stenosis	3
Duodenitis	36
Scarred duodenal cap	37
Duodenal ulcer	10

Assessment of procedure—The figure shows that most of the visual analogue scores recorded by the endoscopists were below 4 cm, indicating that the technique presents no particular difficulties to an experienced operator. The visual analogues scored by the patients confirmed that most tolerated the procedure well. Analysis of the verbal assessment (table II) showed that none of the patients found the procedure unbearable and 112 (60%) found it only mildly unpleasant. This compares with the 95% who found barium meal mildly unpleasant. Altogether 147 patients completed questionnaires relating to both procedures, of whom 119 (81%) preferred the barium-meal examination, 12 (8%) preferred the endoscopy, and 16 (11%) had no preference. Although barium-meal examination was generally preferred by the patients, all the men (118) and 57 of the 69 women



Assessments on 10-cm visual analogue scales of successful endoscopies by doctors (0=easy, 10=impossible) and patients (0=mildly unpleasant, 10=unbearable). Four patients were unable to complete the assessment.
●=Patients aged over 45. o=Patients aged under 45.

TABLE II—*Results of verbal assessment of successful endoscopies by patients according to age under or over 45. (Figures are numbers (%) of patients.)*

	Mildly unpleasant	Unpleasant	Very unpleasant
	Men		
<45 years	42 (64)	17 (26)	7 (11)
>45 years	44 (83)	8 (15)	1 (2)
	Women		
<45 years	14 (39)	16 (44)	6 (17)
>45 years	12 (38)	16 (50)	4 (13)
	All patients		
<45 years	56 (55)	33 (32)	13 (13)
>45 years	56 (66)	24 (28)	5 (6)

in whom endoscopy was successful were prepared if necessary to undergo a second endoscopy performed in the same way.

A total of 114 patients (57%) were discharged back to the general practitioner without further follow-up.

Discussion

This study aimed at using improvements in endoscope design to provide a safe, efficient, and acceptable service to patients and general practitioners, while making optimal use of hospital facilities and resources. The results show that endoscopy performed with the P2 Olympus endoscope was successful in 93·5% of patients without premedication or intravenous sedation. No particular problems were encountered by the endoscopists, who felt that adequate examination of the upper alimentary tract was carried out in each patient and was no more difficult than routine endoscopy carried out under intravenous sedation. Analysis of the verbal and visual analogue scale assessments and the observation that 175 out of 187 patients (94%) indicated that they would undergo a second endoscopy in the same way showed that the procedure was tolerated extremely well. Men and older patients appeared to have a higher level of tolerance.

The absence of premedication and sedation made communication with the patient after endoscopy easy. Patients could, and did, leave the hospital, return to work, or drive immediately after the procedure. As patients did not need admission to a day ward, beds, nursing staff, and other facilities were released for other use. In many cases only a single visit was necessary, saving the time spent in hospital. The average time spent in the clinic was only 45 minutes, part of which was spent on evaluative procedures, which can be omitted in the future.

Interestingly, of the 200 patients referred with specific gastrointestinal tract symptoms, 131 had endoscopic abnormality but only 21 had active duodenal or gastric ulceration while 37 had duodenal scarring. This incidence indicates the possible yield of ulcers diagnosed by endoscopy as a primary screening procedure for patients referred to hospital for investigation of dyspepsia.

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Hospital antibiotic policy in a health district

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Summary and conclusions

A hospital antibiotic policy is described in which only a few antibiotics were used over a two-year period. Six antibiotics—namely, ampicillin, cloxacillin, cephradine, penicillin, erythromycin, and oxytetracycline—accounted for 98% of the antibiotics consumed. Gentamicin was not used topically. Apart from high levels of resistance to ampicillin in Staphylococcus aureus (80%), the Enterobacteriaceae (37%), and Bacteroides (83%), antibiotic resistance was not a problem and no major epidemics of cross-infection occurred.

With this policy antibiotic consumption declined and the total true cost of the antibiotics fell from £16 361 in 1976 to £10 448 in 1978.

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Introduction

During 1977 and 1978 a rigid antibiotic policy was adopted in the hospitals of the King's Lynn Health District (population 150 000). A wide variety of medical and surgical patients are treated in this district, exceptions being patients needing neurosurgery, thoracic surgery, and transplants. I here describe this policy and its effect on costs and resistance.

The policy

A limited range of antibiotics was selected on the following basis. (1) When there was little evidence of differences in clinical effect between similar antibiotic analogues, then the antibiotic was selected according to cost. (2) Antibiotics that were available as both oral and parenteral preparations were favoured. (3) Few antibiotics were available for topical use (except in ophthalmology). Thus topical gentamicin was not prescribed, and the use of disinfectants (notably chlorhexidine and povidine-iodine) was encouraged. (4) A few recently introduced antibiotics were kept in reserve—for example, amikacin, cefuroxime, and cefoxitin. (5) Fixed combinations were discouraged.

Monitoring of policy—No attempt was made to direct the antibiotic prescription of every patient, but when an "unapproved" agent was prescribed or a listed agent was prescribed for an apparently inappropriate condition the prescription was questioned. In most cases such prescriptions were amended after discussion between the clinician and a pharmacist; a few were amended after discussion with the consultant microbiologist.