

Outcome and benefits of upper gastrointestinal endoscopy in the elderly

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SUMMARY

Presenting symptoms, physical findings and treatment were reviewed in 70 patients over 65 years old who underwent oesophago-gastro-duodenoscopy in the Royal Victoria Hospital, Belfast, during an 18-month period. Most frequent indications for the procedure were epigastric pain, retrosternal pain or haematemesis. Physical signs were present in only 54%. Abnormal endoscopic findings were detected in 97%. The majority of patients responded to subsequent treatment. It was not possible to identify clinical features associated with major gastrointestinal pathology, which aided selection of those subgroups of elderly patients who would most benefit from endoscopy.

INTRODUCTION

With an increasing proportion of elderly patients being referred for routine upper gastrointestinal endoscopy, it is desirable to attempt the identification of subgroups who would most benefit from this investigation in terms of diagnosing major pathology. Previous studies have emphasised that increasing age is associated with a 'high-risk' of upper gastrointestinal pathology.^{1, 2} In this retrospective study our aims were two-fold. Firstly, to assess the age/sex distribution, presenting symptoms and clinical signs in elderly patients undergoing this procedure, and secondly, to audit the benefits of the investigation in terms of diagnostic yield and therefore outcome.

METHODS

Clinical records of all patients over 65 years old referred for upper gastrointestinal endoscopy over an 18-month period were reviewed. The main presenting symptoms and signs referable to the gastrointestinal tract were identified. The outcome of endoscopy was classified into 'major' pathology if peptic ulcer, oesophageal stricture or malignant disease was present and 'minor' pathology for other diagnoses. Patients were followed-up 12 months after the initial endoscopy.

Within subgroups based on age/sex breakdown and main presenting symptoms, frequency of major and minor disease was compared using the chi-squared test in order to define those features which might identify high and low risk patients.

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RESULTS

Over 18 months, 28 males (mean age 75 years) and 42 females (mean age 77 years) were identified. Main presenting symptoms and physical signs are summarised in Table I. Ten males and 34 females had more than one presenting symptom. Of these, retrosternal and epigastric pain were the most common in both groups. Lethargy was a presenting feature in 25% of females but was not documented in males. Relevant clinical signs were present in less than 50% of the study group. Despite the frequency of epigastric pain, abdominal tenderness was present in only 14% on examination.

TABLE I

Presenting symptoms and signs prior to endoscopy in elderly patients (n = 70)

	Males	Females	Total (%)
<i>Symptoms:</i>			
Retrosternal pain	10	21	31 (44%)
Epigastric pain	10	18	28 (40%)
Haematemesis	7	10	17 (24%)
Weight loss	5	8	13 (18%)
Lethargy	0	10	10 (14%)
Nausea	3	0	3 (4%)
Melaena	3	0	3 (4%)
Anorexia	0	3	3 (4%)
Dysphagia	0	3	3 (4%)
Collapse	0	3	3 (4%)
<i>Signs:</i>			
Anaemia	10	18	28 (40%)
Epigastric tenderness	3	7	10 (14%)

Endoscopic findings are summarised in Table II. Despite the elderly age group under study, multiple pathology was uncommon. Major upper gastrointestinal pathology, as defined above, was identified in 34%, with gastric ulcer in 19%, duodenal ulcer in 7% and oesophageal stricture in 6%. The incidence of malignant disease was low with gastric carcinoma diagnosed in only one patient.

TABLE II

Endoscopic diagnosis in elderly patients (n = 70)

<i>Endoscopic diagnosis</i>	Males	Females	Total (%)
Oesophagitis	15	19	34 (49%)
Gastric ulcer	4	9	13 (19%)
Normal endoscopy	2	5	7 (10%)
Duodenal ulcer	4	1	5 (7%)
Duodenitis	2	2	4 (6%)
Oesophageal stricture	1	3	4 (6%)
Barrett's oesophagus	0	1	1 (1%)
Gastric carcinoma	0	1	1 (1%)
Gastric leiomyoma	0	1	1 (1%)

There was satisfactory tolerance of endoscopy with no complications. A barium meal examination was performed on only 14 patients before or after endoscopy and the small number presented a valid comparison of diagnostic efficacy between the two investigations. However, in two cases these investigations were complementary in the diagnosis of a gastric leiomyoma in one patient and pyloric outlet obstruction in another case.

Institution or change of therapy following endoscopy is summarised in Table III. Thirty patients had more than two therapeutic changes, eg, oesophageal dilatation and H₂ blocker commenced, and 32 patients had three therapeutic changes based on endoscopic findings. Changes in therapy most frequently involved the commencement of H₂ blockers.

TABLE III
Therapeutic management after endoscopy in elderly patients

<i>Therapy</i>	<i>No of patients</i>
H ₂ -blocker commenced	57
Antacid continued	31
Antacid commenced	17
H ₂ -blocker continued	16
No therapy change	10
NSAID discontinued	7
Iron commenced	6
Oesophageal dilatation	6
Salicylate discontinued	4
Antiemetic commenced	4
Analgesic commenced	1

The results of comparison of the frequency of major and minor gastrointestinal disease in certain subgroups of the study population based on age/sex and main presenting symptoms are shown in Table IV. There were no identifiable features in any particular group or symptom in significant association with major or minor disease.

At follow-up, one year after endoscopy, it was possible to trace and determine the outcome in 56 patients. Of these, seven had died of causes unassociated with the original diagnosis and one patient had died from gastric carcinoma diagnosed at the original endoscopy. Of the remaining 48 patients, 38 had shown improvement or resolution of their symptoms, five had shown no change in symptoms and five had deteriorated and required further investigation or therapy.

DISCUSSION

In the general population, certain characteristics and clinical signs have been suggested as useful indicators to the severity of upper gastrointestinal disease. Mann et al devised a simple scoring system to predict whether endoscopy would be likely to reveal major disease.¹ The present study suggests that such a method of selection for endoscopy does not appear to be possible in the elderly population. Symptoms are often ill-defined or atypical and physical signs may be

TABLE IV

Statistical comparison between frequency of 'major' and 'minor' disease in subgroups of elderly patients based on age, sex and presenting symptoms

<i>Characteristic</i>	<i>No with major disease</i>	<i>No with minor disease</i>	<i>Significant¹</i>
Sex: Male	9	19	NS
Female	14	28	
Age: 65–75	12	22	NS
>75	13	23	
Symptom:			
Retrosternal pain	14	17	NS
None	11	28	
Epigastric pain	11	17	NS
None	18	34	
Haematemesis	7	10	NS
None	18	35	

(Chi-square analysis¹)

irrelevant. In this study, statistical analysis failed to show a significant association between the finding of major disease at endoscopy and any specific symptoms collected during history taking at the time of presentation. These results suggest that further investigation is usually warranted and should be instigated in view of the high incidence of pathology in patients over 65 years. Therapeutic changes resulted in the majority of patients — a finding which is in agreement with a previous study of the outcome of endoscopy in the elderly which demonstrated that management is changed following upper gastrointestinal endoscopy in over half of those patients in whom an abnormality is diagnosed.²

In the present study, endoscopy was undertaken in all patients referred with a provisional diagnosis related to the upper gastrointestinal tract, in many cases without specific symptoms or relevant signs. The procedure resulted in a significant yield of pathological findings and was extremely well tolerated with no complications. The low incidence of malignancy (1%) in the group contrasts with the 15% reported by Lockhart et al.²

Endoscopic investigation appears to be extremely useful, both diagnostically and in therapeutic management in the elderly. Whether it is more useful than radiological investigation in elderly patients is debatable.^{3,4} In our study, as in others, it was tolerated at least as well.⁵ Cost effectiveness of increased use of endoscopy in terms of reduction of peptic ulcer disease complication rates is doubtful,⁶ and its effects on long-term morbidity and treatment costs would require prospective patient comparison and longer periods of follow-up. Our results emphasise the safety of the procedure in the elderly population, and particularly highlight the need for further investigation of these patients when they present with upper gastrointestinal symptoms and a concomitant lack of physical signs.

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