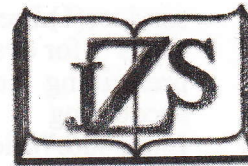


Some Features of a Local Private Upper Gastrointestinal Endoscopic (UGIE) practice Particularly Dyspeptic Symptoms Predictive Value of the results A prospective Analysis of 1700 cases



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Abstract

Background: Better selection of dyspeptic patients for UGIE to avoid the enormous costs of both overendoscopy & overtreatment is a hot topic of recent literature, but no fixed guidelines have been agreed upon yet.

Methods: A prospective study of 1700 dyspeptic patients who had undergone UGIE in the UGIE clinic of the authors were examined & asked about common dyspeptic symptoms prior to UGIE then the statistical significance of these symptoms were measured in relation to the UGIEic results by using the qui square analysis regarding P value of < 0.05 as statistically significant. Also other features of our UGIE practice were studied as shown in the text.

Results: Dyspeptic symptoms can be used for better selection of patients for UGIE, although UGIE can have reassuring effect on those with functional dyspepsia. The time needed to complete an UGIE & that needed to intubate its different levels was recorded. Duodenal ulceration was the commonest UGIE ic finding followed by reflux oesophagitis, antral gastritis & carcinoma stomach & oesophagus. Pyloric ring appearance had a positive predictive value of finding a duodenal pathology.

Keywords: Upper GI endoscopy, Dyspeptic symptoms / non-ulcer Dyspepsia H. Pylor.

Introduction

The rapid development of high technology procedures such as UGIE & Limited ability of health care system & patients to provide the expenses of these procedures because of constraining resources had stimulated an evaluation of the appropriate use of endoscopic procedures (1). Also serious concern about the effects of a reduction in the health care costs on the quality of patient care had led to critical analysis of endoscopic

practice (2-4). There is both overuse & under use of UGIE in the rate of 5% (1) & both are often cost-ineffective (5) which suggest that the criteria by which patients are selected for UGIE can be improved (1), keeping in mind that UGIE can provide reassurance for 70% of patients with no or minor abnormalities on UGIE (6).

Improving the safety & reducing the costs of UGIE is the goal of all UGIE

services(1). Prescription of (ulcer healing drugs) for dyspepsia accounts for 10% of all prescribing costs in the general practice accounting for >500\$s costs in England&Wales in 1996 alone(7), so prompt UGIE to determine which patients will really need these drugs may have a cost benefit, in addition to the reassurance that this procedure may provide for those patients with normal UGI (5).

There are important approaches in better selection of dyspeptic patients for UGIE to avoid the costs of both extremes of management policy i.e (endoscopy for all) & (acid suppressants for all) approaches. These include :

1. Selection of patients with alarm symptoms such as ulcer like dyspepsia ,nonsteroidal anti-inflammatory drugs (NSAIDS) use & those with positive helicobacter pylori (H.P)serology(8). Eradicating H.P in patients with peptic ulcers offers the prospect of reducing the enormous costs of dyspepsia management(7) & some guide- lines recommend routine testing of dyspeptic patients in primary care setting for H.P, also patients with non-ulcer dyspepsia (NUD) & negative serology for H.P can be managed without endoscopy (9), & it is found that the strategy of screening dyspeptic patients by serology for H.P is more sensitive than symptom-based screening strategies & may have an important role in reducing endoscopic load (8). although neither (test & treat) nor (test & endoscopy) strategies have been investigated in terms of cost-effectiveness(10). Protection of endoscopy personal is another benefit of screening for H.P since there is increased risk of H.P infection in endoscopy personal specially older GI endoscopists & younger endoscopy nurses(11).

2. Symptoms-based strategy in selecting patients for UGIE excluding patients whose symptoms may suggest NUD as non-smoking, non-caucasian, not on acid-suppressant ,negative H.P serology & absence of alarm symptoms (12), although

UGIE can provide reassurance for these patients(5), which may not be afforded by drugs, physician explanation & reassurance alone without endoscopy, keeping in mind that at least 50% of patients seen in primary care setting have NUD in which no definite structural or biochemical explanation can be identified (7). Several scoring systems have been developed for positive diagnosis of irritable bowel syndrome (IBS) & its differentiation from organic GI diseases such as Manning , Talley, Kruis & Bellanani having sensitivities & specificities approaching 50-80%, in addition the presence of extraintestinal manifestations as urological ,gynecological, rheumatological, psychological, or dyspeptic symptoms which reflect smooth muscle dysfunction or altered visceral perception that believed to be important features of IBS , suggest a functional base of the patients symptoms (13).

3. Empirical drug treatment strategy: This strategy in patients with dyspeptic symptoms had resulted in 69% fewer endoscopies with lower medical costs & equal effectiveness in the first year of follow up compared with prompt endoscopy followed by directed medical therapy (14). Also omeprazole was found to be modestly superior to placebo in functional dyspepsia but not in dysmotility - like dyspepsia (15). Others suggest that empirical drug therapy as a trial of H2-Blockers before considering referral for endoscopy should be subjected to formal clinical evaluation at all levels of efficacy (6).

Endoscopy without sedation would reduce the costs & improve the safety because a substantial proportion of procedure - related complications are related to sedation & analgesia & endoscopy without sedation reduces the costs by eliminating the need for hemodynamic monitoring during the procedure , time in recovery room , some of the nursing staff , a day off work by the patients & a person to accompany the patient

home from the procedure ,so performing endoscopy without sedation would be a worthwhile goal (1) & this goal can be achieved by the use of ultrathin endoscopes with diameters of 5.3-5.9 mms instead of 9-11 mms (1).

Conclusion

- 1.dyspeptic symptoms can be used for better selection of dyspeptic patients for UGIE.
- 2.Dudenal ulceration was the most common endoscopic finding & it was found that carcinoma stomach and oesophagus is still a problem in our locality & that reflux oesophagitis is not the first identified lesion as shown by western literature.
- 3.The median time needed to complete an UGIE is 10 minutes.
- 4.UGIE can have a reassuring effect on patients with functional dyspepsia .
- 5.UGIE is an unpleasant procedure & it is difficult to persuade a patient to undergo a second UGIE if clinically indicated whoever was the first endoscopist.
- 6.The pyloric ring appearance can have a predictive value of a positive or negative results during UGIE.

The objectives of this prospective study were

- 1.To explore the importance of the dyspeptic symptoms in predicting UGI pathologies during UGIE for better selection of those who really need to undergo UGIE .
- 2.Explore the possibility of doing UGIE without sedation ,even with the use of standard non – ultrathin endoscopes.
- 3.To measure the time needed to perform & complete an UGIE & that needed to intubate & examine its different levels.
- 4.Determine the % of patients who accept second UGIE when clinically indicated whether the initial first endoscope was performed by the authors or not

5.Explore the role of UGIE in alleviating the symptoms & anxiety of dyspeptic patients who were found to have negative finding on UGIE.

6.Determine the effects of confrontation in performing successful UGIE if the first trial of intubation had failed.

Materials & methods

We report the results of our UGIE private practice during the period from the 1st January 1999 – 1st January 2000 . The study was a prospective one .The endoscope used was of the type(GIF-Q Olympus) of standard diameter of 11 mms .We endoscoped 1700 patients presented with dyspeptic symptoms to the authors private endoscopy clinic.The patients were fully examined and all the dyspeptic symptoms were recorded as in table 4 .All the endoscopies were performed without sedation or any premedication & no local anaesthesia was used in the majority of cases. Biopsies were taken when indicated & sent for histopathological examination.The time needed to perform UGIE & also that needed to intubate different levels of UGI was recorded in minutes& the median time was calculated.Normal pyloric ring was : smooth rounded or ovale, not oedematous,or closed with smooth folds or normal appearing duodenal bulb on transpyloric view ,while an abnormal pyloric ring was : nonsmooth or irregular outline or deformed ring or oedematous edge or fixed closed or abnormal pyloric bulb appearing on transpyloric view(16).

Results

The age of the patients was between 8-86 years.

The male/female ratio was: 1.2/1.

The other results are summarized in the following tables:

Table No.1.
The pathologies discovered in a total of 1700 patients undergoing UGIE :

Pathologies	No.
Deudenal ulcer (DU)	361
	104
Reflux oesophagitis.	023
Antral gastritis.	015
Carcinoma stomach.	012
Carcinoma oesophagus.	
Medomycin- induced	006
Oesophageal ulcer.	002
	001
Bleeding DU	001
Bleeding varieces.	003
Benign gastric ulcer	002
(GU)	
Non-bleeding varieces.	
Achalasia.	
Total	430 (25%)

Table No.2.
Median duration in minutes needed for performing a successful UGIE & that needed to intubate different levels of UGI.

The procedure	Median duration (mins)
Upper oes.	1.5
Intubation.	1
Oes.	1
Examination.	1.2
Stomach entry.	2.3
Stomach examination.	1
	2
Pyloric intubation.	
Dudenal examination.	
Biopsy.	
Total	10(3.5-16.5)

Table No.3.
The pyloric ring (PR) appearance & prediction of a positive finding on duodenal cap(DC) examination.

	Pyloric ring appearance	+ ve DC pathology	P
Abnor mal	300 1400	205 056	<0.05
Normal			

Table No.4.
Cooperation during UGIE & endoscopic results.

Level of cooperatio n.	No	+ ve endoscopi c finding	P
Cooperati ve	1606	414	<0.05
Uncoopera tive	94	016	
Total	1700	431	

Table No. 5.
Patients acceptance of second UGIE & relation to the first endoscopist.

First UGIE	No	Acceptanc e of second endoscopy	P
Done by the authors.	51 42	4 3	>0.05
Done by others.			
Total	93	7	

Table No.6:

Successful second trial of intubation in case of failure of the first trial by confrontation with a second patient endoscoped successfully in front of him.

Procedure	No.	Successful intubation	P value
Explanation & Reassurance.	10	1	<0.0005
= + confrontation.	8	7	
Total	18	8	

Table No. 7.

The effect of UGIE on symptoms control in patients with no identifiable significant pathologies.

Management policy	No.	Symptoms control	P value.
Drugs+reassurance.	500	150	<0.0005
=====+ UGIE.	530	332	
Total.	1030	482	

Drugs = antimotility + antidepressant + laxative (if constipated).

Table No.8.

Dyspeptic symptoms & their + ve or - ve predictive values.

Symptoms	No	+ ve pathology by UGIE	P value.
Epigastric pain	110	40	<0.005.
Heart burn	900	160	
Hunger pain	800	340	
Night pain	615	412	
Smoking	500	310	
Anorexia	50	35	
Dysphagia	20	19	
Weight loss	100	90	
Vomiting	100	50	
Hematemesis	10	08	
& or Melena.	900	20	
Postprandial heaviness	20	00	
Throat discomfort	1000	10	
Gases / or abd. Distention	400	6	
Diffuse abd. Pain	1200	20	
Constipatin	21	00	
Diarhea	800	200	
Anxiety / or insomnia	622	9	
Extraintestinal features	34	23	
Prior NSAIDs use.			
Total	8202	1554	

Prior NSAIDs use =Non-steroidal anti-inflammatory drugs use before a week of UGIE.

Discussion

Table No. 1 includes the results of our UGIE during the period of the study. The positive pathologies represented about 25% of all cases which goes with other studies that state that in at least 50% of patients seen in primary care setting no definite structural or biochemical explanation can be identified for the symptoms (13,14,17). The most common pathologies in order of frequency were : DU , reflux oesophagitis , antral gastritis , carcinoma of stomach & carcinoma of oesophagus. Studies done in the western countries revealed that gastrooesophageal reflux disease (GORD) is the most common endoscopically identified pathology while the DU is the second (16). An important feature of our series is that carcinoma of stomach & oesophagus is still a problem in our locality & that benign gastric ulcer is extremely rare, so any gastric ulcer should be regarded malignant unless proved otherwise. Table No. 2. shows the median time needed to complete an UGIE which was in our series about 10 minutes (3.5-16.5), the longest portion of this time is spent for duodenal intubation (2.3 minutes), followed by upper oesophageal intubation (1.5 minutes). In reviewing the available literature no mention was found of a work like ours. Table No.3. shows that the appearance of pyloric ring have a negative predictive value (if normal) & a positive predictive value (if abnormal) of duodenal pathologies upon intubation & inspection of duodenal bulb. As it is obvious abnormal appearing pyloric ring has a statistically significant value of finding a pathology upon intubation of pyloric ring & inspecting the duodenal bulb & the vice versa is true. This finding may have a practical value since pyloric ring intubation needs the longest time than intubation of other levels of UGI & it is the source of the most discomfort during UGIE. In reviewing the available literature no mention was found of such an approach except the transpyloric viewing of duodenal bulb in cases of difficulty of intubating the pyloric ring (16,18).

Table No. 4. shows that those with positive pathologies are more cooperative & more resistive during UGIE than those with negative results reflecting altered perception in these patients with functional symptoms (13).

Table No. 5. shows that the acceptance of a second endoscopy if needed & indicated clinically does not depend on who had done the first endoscopy. This means that UGIE is an unpleasant experience to the patient whoever was the endoscopist although repeated regular endoscopies are usually done & accepted easily by the patients in Japan for screening the population for the high prevalent gastric cancer. This difference may be due to cultural variations between nations & the possible diseases for which the endoscopy is done (19,20,21).

Table No.6. shows that in an uncooperative patient in whom the first trial of endoscopic intubation had failed the procedure of confronting the patient with a successful intubation in a second patient will lead to a successful intubation in that patient by a second trial. No mention was found of such an approach in the available literature. Table No.7. shows the beneficial reassurance effect of endoscopy in patients with IBS & dyspeptic symptoms whose UGIEs were negative. This was affirmed by another study (6).

Table No.8. shows the positive & negative predictive values of common dyspeptic symptoms during UGIE. It shows that symptoms having the most positive predictive values are : hunger pains, night pains, dysphagia, Anorexia, hematemesis/ or melena , smoking & prior NSAIDs use. The symptoms having the most negative predictive values are: heart burn, epigastric pain, vomiting, postprandial heaviness, throat discomfort, gases/ or abdominal distention, diffuse abdominal pain, constipation/ or diarrhea, anxiety/ or insomnia & extragastrintestinal manifestations.

It appears that the management strategies for dyspeptic symptoms fall into two extremes (endoscopy for all or empirical acid suppressing drugs for all) & both extremes are often cost ineffective(5) although some recent studies suggest that the second strategy may be cost effective by symptoms resolution effectiveness & sparing of unnecessary endoscopies.(14,15).The situation may differ in developing countries like ours since endoscopy is cheaper than radiological UGI facilities(18).

To reduce the costs of management of dyspeptic patients ,better selection of these patients through symptom-based approach,H.pylori serology testing(22) & empirical therapy seems to be a logical solution to avoid the costs of both overendoscopy & overtreatment.

Key points & recommendations 1.The

most important GI problems in our locality discovered by UGIE is duodenal ulceration,reflux oesophagitis,antral gastritis,carcinoma stomach & carcinoma oesophagus.

2.Benign gastric ulcer seems to be very rare.

3.The median time needed to complete an UGIE is 10 mins.(3.5-16.5 mins.) including biopsing lesions when indicated.

The appearance of pyloric ring has a diagnostic predictive value of duodenal cap pathologies.

5.The patients with negative UGIE results appear to less cooperative & more resistive during the procedure & can be successfully intubated by confronting them with a second patient in whom successful UGIE is completed, when the first trial of intubation fails in these uncooperative resistive patients.

6.The acceptance of a second endoscopy if needed & indicated clinically dose not depend on whom who did the first endoscope.

7.Dyspeptic symptoms can have both positive & negative predictive values of UGIE results & these can be used for better selection of these patients for UGIE in addition to other approaches as H.pylori serology screening & empirical drug therapy to avoid the overuse & underuse of UGIE , although UGIE can have a reassuring effect on those with negative resultson UGIE

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