

## Causes of dyspepsia in patients consulting Tikrit teaching hospital

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### Abstract:

To identify the causes of dyspepsia in Tikrit province, upper gastrointestinal (GIT) endoscopy was done and antral biopsies were taken from 200 patients. Abnormal findings on endoscopy were significantly higher in older age group (45 years and older) than the younger age group (below 45 years old), 81% versus 50%. Gastric ulcer, duodenal ulcer, gastritis and/or duodenitis and gastroesophageal reflux disease were found in 5%, 21%, 22% and 2% of the younger age group and 10%, 24%, 28% and 12% of the older age group respectively. Malignant diseases were found in 7 patients of the older age group but none in the younger age group.

H.pylori was detected in 68% of younger and 81% of older dyspeptic patients. Abdominal pain was the most frequent symptoms in patients included in this study. Loss of appetite, loss of weight and dysphagia were more common in those with malignancies.

### مسح المرضى المصابين بعسر الهضم عن طريق تنظير اعلى الجهاز الهضمي

صامت الياس قاسم

#### المستخلص

لمعرفة أسباب عسر الهضم في تكريت أجريت عملية تنظير أعلى الجهاز الهضمي لمتني مريض يعانون من هذا المرض مع أخذ عينات نسيجية من المعدة للفحوصات المختبرية. أظهرت الدراسة أن 50% من المرضى دون 45 سنة لا يعانون من أمراض عضوية وأن سبب عسر الهضم هو اضطرابات وظيفية، بينما كانت هناك أسباب عضوية لعسر الهضم لدى 81% من المرضى الذين تجاوزوا 45 سنة من العمر. كانت أسباب عسر الهضم لدى المرضى دون الخامسة والأربعين من العمر هي قرحة المعدة (5%)، قرحة الأثني عشري (21%)، التهابات المعدة والأثني عشري (22%)، والتهاب المرئ (2%)، أما لدى المرضى الذين تجاوزوا الخامسة والأربعين فكانت الأسباب هي قرحة المعدة (10%)، قرحة الأثني عشري (24%)، التهابات المعدة والأثني عشري (28%)، والتهاب المرئ (12%)، وأورام المرئ والمعدة (7%). تم عزل جرثومة الهيليكوباكتر من 68% من العينات النسيجية للمرضى دون الخامسة والأربعين و (81%) للمرضى الذين تجاوزوا الخامسة والأربعين من العمر. كانت آلام البطن هي المشكلة الرئيسية لدى جميع المرضى بينما كان فقدان الشهية للطعام، فقدان الوزن وصعوبة البلع هي المشكلة الرئيسية لدى المرضى المصابين بأورام المرئ والمعدة.

## Introduction

Dyspepsia is one the most common gastrointestinal disorders. It is a collection of symptoms which include anorexia, nausea, vomiting, heartburn, regurgitation, flatulence, upper abdominal discomfort and other symptoms referable to the proximal gastrointestinal tract<sup>(1)</sup>. Upper gastrointestinal endoscopy is the investigation of choice for dyspepsia. Although in most of the patients, there is no serious disease, but the possibility of malignancies is still present especially in older patients<sup>(2,3)</sup>. The demand for endoscopy is increasing and patients with serious diseases who need urgent investigations should wait as long as those with benign disease or functional dyspepsia, therefore, a more critical approach is needed to reduce the number of unnecessary endoscopies. The extent to which dyspepsia should be investigated is controversial especially in young patients. Various policies have been proposed to reduce the number of unnecessary endoscopies as use of simple age restriction and identification of high risk patients on the base of their symptoms<sup>(4,5,6)</sup>. Investigations of young dyspeptic patients rarely influence their management and most of them can be treated empirically and endoscopy can be avoided in the first instance<sup>(7,8)</sup>.

### Aims of the study

This study aimed to:

- 1- Identify the causes of dyspepsia in Tikrit province.
- 2- Determine the importance of endoscopy in dyspepsia.

### Patients and methods

Two hundred patients with dyspepsia consulting the outpatient clinic in Tikrit teaching hospital from July 2002 to May 2004, 100 patients above 45 years old (older age group) and 100 patients below 45 years old

(younger age group) were included in this study. Fifty seven patients of the younger age group were males and 43 were females, the mean age was 32 years, while in the older age group 62 patients were males and 38 were females and the mean age was 56 years. After detailed history taking esophagogastroduodenoscopy was done. The endoscopical finding were divided into six groups; normal, gastric ulcer (GU), duodenal ulcer (DU), gastritis and or duodenitis, gastroesophageal reflux disease (GERD) and malignancies. Two biopsies were taken from the gastric antrum in addition to biopsies from any lesion if present. The specimens were fixed in formaline 10%, one was stained with Hematoxylin & Eosin for histopathological examination and the other was stained with Giemsa stain and examined under microscopy for small spiral or curved bacilli of *H.pylori* on the surface epithelium. Ultrasound of abdomen was done for all patients to detect any hepatobiliary, pancreatic and other abdominal disorders as a cause for dyspepsia.

Blood sample was taken from all patients for determination of serum calcium level to exclude hypercalcemia as a cause for dyspepsia. Patients with systemic diseases as ischemic heart diseases, heart failure, renal failure and diabetes mellitus were excluded from the study. Chi square and Z-test were used for data analysis and to determine the level of significance

### Results

Table (1) show the endoscopical finding of all patients included in this study. Normal endoscopy was significantly higher in younger than the older age group 50%

Vs 19% ( $P < 0.001$ ), while GERD was significantly higher in older age group 12% Vs 2% ( $P < 0.05$ ). malignancies were confined only to the older age

group 7% (7 patients; six patients with adenocarcinoma and one lymphoma). Although GU, DU and gastritis and/or duodenitis were more common in older age group 10%, 24% and 28% Vs 5%, 21% and 22% respectively, but these differences were statistically not significant ( $P > 0.05$ ).

The prevalence of *H.pylori* in relation to the endoscopical finding were shown in table (2&3). The prevalence of *H.pylori* was significantly higher in the older than the younger age group 81% Vs 68% ( $P < 0.05$ ). Table (4) show the frequency of the symptoms in all patients included in the study. In those with normal endoscopy abdominal pain, belching and abdominal distension were more common. In G.U, D.U and gastritis and/or duodenitis abdominal pain, acidity, nausea and vomiting were more common. In those with GERD heartburn and regurgitation were more common, while in patients with malignancies; anorexia, loss of weight and dysphagia were more common.

Gall stones were found in thirteen patients with normal endoscopy ( 4 from younger and 9 from older age group), all of them were females except one in the older age group was male.

### **Discussion**

The normal endoscopical finding in this study was significantly higher in younger than older age group, a similar figures were reported by other studies<sup>(1,2,5,10)</sup>. This high percent of normal endoscopy could be explained on the bases of functional dyspepsia, which is more common in young age. In this study G.U was found in 5%

### **Conclusions**

According to these results we can conclude that:

- 1- There was no organic cause for dyspepsia in about 50% of patients below 45 years old.

of younger age group which was in agreement to that reported by other studies<sup>(1,2,10)</sup>, while D.U was found in 21% which was lower than that reported by some studies<sup>(1,9)</sup>, which suggest that D.U is still more common in developed countries. Gastritis and/or duodenitis was reported in 22% of the younger age group, which was also lower than that reported by other studies<sup>(1,2,9)</sup>, probably because some of the patients who were considered normal in this study might be considered to have gastritis and/or duodenitis if the endoscopy was done by another gastroenterologist. GERD was found in 2% which was lower than that reported by other studies<sup>(1,2,5,10)</sup>, probably because alcohol ingestion, which play an important role in GERD, is much more common in western countries. No malignancy was reported in the younger age group in this study like all other similar studies<sup>(1,2,5,9,10)</sup>.

Regarding the older age group normal endoscopy, G.U, D.U, gastritis and/or duodenitis and GERD were reported in 19%, 10%, 24%, 28% and 12% respectively, all these figures were similar to that reported by other studies<sup>(1,2,5,9)</sup>, but malignancies were reported in 7% which was higher than that reported by other studies<sup>(1,2,4)</sup>, most likely because of the variation in geographical distribution of the upper gastrointestinal malignancies. *H.pylori* was detected in 68% of the younger and 81% of the older age group. *H.pylori* was found in 80%, 93.3%, 82%, 35.7% and 100% of patients with G.U, D.U, gastritis and/or duodenitis, GERD and malignancies, a similar figures were reported by other studies<sup>(1,11,12,13,14)</sup>

- 2- No malignancy was found as a cause of dyspepsia in patients below 45 years old.
- 3- Malignancies may be a cause of dyspepsia in elderly.

- 4- *H.pylori* is commonly associated with upper gastrointestinal diseases.
- 5- Loss of weight and dysphagia are serious features, which require urgent investigations in patients with dyspepsia.
- (below 45 years old), and most of these patients respond to symptomatic treatment, it is better to treat these patients empirically on the basis of their symptoms, and those who will not respond to treatment can be re-evaluated by endoscopy.

### Recommendation

Since malignancies are very unlikely cause of dyspepsia in young patients

**Table (1): The endoscopic finding in patients included in the study**

Endoscopic Finding	Patients<45 Years old	Patients>45 Years old	Total	P Value
Normal	50	19	<sup>[1]</sup> 69	*P<0.001
GU	5	10	<sup>[2]</sup> 15	P>0.05
DU	21	24	<sup>[3]</sup> 45	P>0.05
Gastritis/duodenitis	22	28	<sup>[4]</sup> 50	P>0.05
GERD	2	12	14	*P<0.05
Malignancies	0	7	7	*P<0.05
Total	100	100	200	

<sup>[1]</sup> 6 patients were on NSAIDs, 4 from the younger & 2 from the older age group

<sup>[2]</sup> 2 patients were on NSAIDs, 1 from the younger & 1 from the older age group

<sup>[3]</sup> 3 patients from the older age group were on NSAIDs.

<sup>[4]</sup> 2 patients from the older age group were on NSAIDs.

**Table (2): The prevalence of *H.pylori* in relation to endoscopic finding and age group**

Endoscopic Finding	Younger age group		Older age group		P Value
	No.of patients	<i>H.pylori</i> (+ve) No. ( % )	No.of patients	<i>H.pylori</i> (+ve) No. ( % )	
Normal	50	29 (58)	19	13 (68.4)	*P< 0.05
GU	5	4 (80)	10	8 (80)	P> 0.05
DU	21	19 (90.5)	24	23 (95.8)	P> 0.05
Gastritis /duodenitis	22	16 (73.7)	28	25 (89.3)	*P< 0.05
GERD	2	0 (0)	12	5 (41.6)	*P< 0.05
Malignancies	0	0 (0)	7	7 (100)	*P< 0.05
Total	100	68 (68)	100	81 (81)	*P< 0.05

**Table (3): The prevalence of H.pylori in all patients included in the study**

Endoscopical finding	Number of patients	H.pylori +ve	% of H.pylori +ve
Normal	69	42	61%
G.U	15	12	80%
D.U	45	42	93.3%
Gastritis/duodenitis	50	41	82%
GERD	14	5	35.7%
Malignancies	7	7	100%
Total	200	149	74.5%

**Table (4): Frequency of symptoms in patients included in the study**

Symptom	Normal endoscopy	G.U	D.U	Gastritis Duodenitis	GERD	Malignancy
Abdominal pain	60%	86%	92%	74%	21%	22%
Abdominal distension	56%	36%	12%	26%	0%	17%
Anorexia	43%	42%	36%	11%	22%	88%
Nausea	32%	67%	56%	52%	16%	34%
Vomiting	12%	54%	51%	46%	14%	28%
Acidity	23%	96%	98%	65%	44%	11%
Regurgitation	9%	28%	19%	3%	87%	6%
Belching	52%	31%	22%	43%	29%	13%
Heartburn	8%	8%	18%	7%	81%	2%
Dysphagia	5%	3%	0%	1%	19%	43%
Loss of weight	0%	2%	3%	6%	4%	79%

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