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The Impact of Routine Oesophagogastroduodenoscopy on the Management Plan Before Cholecystectomy: A Prospective Study

Al-Eass AZK[1]*, Abdulla MA[2], Al-Mayyahi ZA[3], Chasib TJ[1] and Khudhair HY[1]

[1]Department of General Surgery, Al-Basra Teaching Hospital, University of Basrah, Basrah, Iraq
[2]Department of Surgery, Basrah College of Medicine, University of Basrah, Basrah, Iraq
[3]College of Medicine, University of Basrah, Basrah, Iraq

Abstract

Introduction: Laparoscopic cholecystectomy has rapidly become the procedure of choice for routine gallbladder disease and it is currently the most commonly performed major abdominal procedure in Western countries, most authors suggest that it's safe to observe patients with asymptomatic gallstones, with cholecystectomy only being performed for those patients who develop symptoms. Fifteen percent of patients persist to have post cholecystectomy symptoms. This study aimed to evaluate the use of oesophagogastroduodenoscopy prior to laparoscopic cholecystectomy, and its impact on the management.

Method: This was a prospective clinical study involving patients with gallstone admitted to the Al-Basra Teaching Hospital, Department of General Surgery from January 2016 to December 2019. All patients were followed up from the time of admission until six months later. These patients were divided into seven groups according to age. All patients were having an abdominal ultrasound examination in order to diagnose the presence of cholelithiasis and to exclude other abdominal problems. All patients scheduled for laparoscopic cholecystectomy underwent upper GIT endoscopy preoperatively.

Results: A total of 1200 patient age range from 21 to 82 years were included (women, 83.33%, men, 16.66%) had cholelithiasis. Female to male ratio was 5:1. Positive endoscopic findings were observed in 380 (31.6 %) patients. The management plan was changed in these patients with positive findings by endoscopy and their surgery was postponed until they received proper treatment.

Conclusion: The routine use of oesophagogastroduodenoscopy prior to cholecystectomy would decrease the unneeded cholecystectomy in patients with cholelithiasis and positive endoscopic findings, which decrease post cholecystectomy persistence of symptoms.

Keywords: Cholecystectomy; Endoscopy Before Cholecystectomy; Laparoscopic Cholecystectomy; Management of Cholelithiasis

Correspondence to: Ahmed Z Khalaf Al-Eass, Department of General Surgery, Al-Basra Teaching Hospital, University of Basrah, Basrah, Iraq; Tel: 09647712500135; E-mail: Ahmed.Khalaf@uobasrah.edu.iq

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Introduction

Laparoscopic cholecystectomy has rapidly become the procedure of choice for routine gallbladder disease and it's currently the most commonly performed major abdominal procedure in Western countries [1-3]. Laparoscopic cholecystectomy provides a safe and effective treatment for most patients with symptomatic gallstones and has become the treatment of choice for many patients [4-9].

Most authors would suggest that it's safe to observe patients with asymptomatic gallstones, with cholecystectomy only being performed for those patients who develop symptoms or complications of their gallstones [7]. Laparoscopic cholecystectomy is the procedure of choice for the majority of patients with gallbladder disease [1-9].

In 15% of patients, cholecystectomy fail to relieve the symptoms for which the operation was performed, such patients may be considered to have a post-cholecystectomy syndrome [10,11]. However, such problems are usually related to the preoperative symptoms and are merely a continuation of those symptoms [1,12]. This study aimed to evaluate the use of oesophagogastroduodenoscopy prior to laparoscopic cholecystectomy, and its impact on the management plan of patients with symptomatic gallstones.

Methods

This was a prospective clinical study which carried out from January 2016-December 2019 in Al-Basra Teaching Hospital Department of General Surgery. The Al-Basra Teaching Hospital is a 600-bedded public hospital with 700 to 1000 patients attending the outpatient clinics every day and about 1000-1250 patients attending the emergency unite every day. A total of 1200 patients were divided into six groups according to age, these patients with symptomatic cholelithiasis who scheduled for doing laparoscopic cholecystectomy by many surgeons are offered an

OGD examination to rule out any other gastric, esophageal or duodenal pathology that may give upper abdominal pain. Informed consent was obtained from each patient who enrolled in this study, and the study was approved by the ethics committee. All patients were followed up from the time of admission until six months later. All patients were having an abdominal ultrasound examination in order to diagnose the presence of cholelithiasis and to exclude other abdominal problems. All other preoperative investigation was done as routine cases. The results were entered data base and analyzed.

Exclusion criteria:

- All patients with acute cholecystitis were excluded from the study.
- Pediatric patients younger than 16 years of age were exclude from the study.

Results

A total of 1200 patient age 21 to 82 years with female to male ratio 5:1, of these females were 1000 (83.4%), males were 200 (16.6%).

Majority of the patients were in the fourth decade age as shown in table 1.

Majority of patients 700 (58.3%) they presented with Epigastric pain, whereas the other presented with right hypochondrial pain in 200 (16.6%) patients, bloating in 150 (12.5%) patients, heart burn in 60 (5%) patients, vomiting in 50 (4.1%) patients, and indigestion in 40 (3.3%) patients (Figure 1).

The preoperative abdominal ultrasound examination showed multiple gallstones in majority of patient 1040 (86.6%), single gallstone in 110 (9.1%) patients, empyaema in 30 (2.5%) patients, and gallbladder polyp in 20 (1.6%) patients.

Positive endoscopic findings were found in 380 (31.6%) patients, and the main endoscopic findings were duodenal ulcer found in 120 (10%) patients, gastritis in 90 (7.5%) patients, esophagitis in 60 (5%) patients, benign gastric ulcer in 50 (4.1%) patients, hiatus hernia in 40 (3.3%) patients, and gastric outlet obstruction in 20 (2%) patients (Table 2).

Table 1: Gender and age group distribution.

Total N. (%)	Male N. (%)	Female N. (%)	Age groups
120 (10)	30 (2.5)	90 (7.5)	20-29
280 (23.3)	50 (4.1)	230 (19.2)	30-39
360 (30)	40 (3.3)	320 (26.7)	40-49
280 (23.3)	30 (2.5)	250 (20.8)	50-59
110 (9.2)	30 (2.5)	80 (6.7)	60-69
50 (4.2)	20 (1.7)	30 (2.5)	70+
1200 (100)	200 (16.6)	1000 (83.4)	Total N. (%)

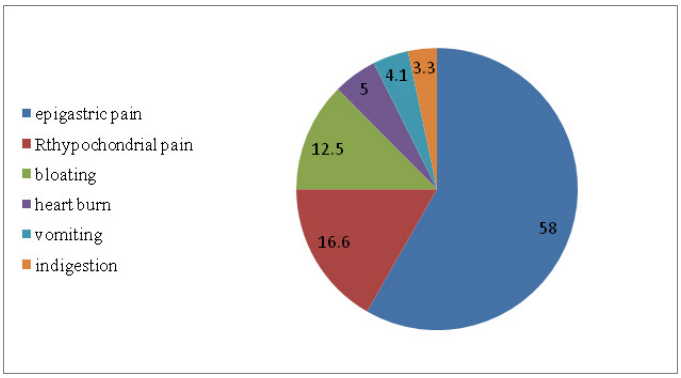

Figure 1: The presenting symptoms.

Table 2: OGD findings.

percent	N.	Findings
10	120	Duodenal ulcer
7.5	90	Gastritis
5	60	Esophagitis
4.1	50	Benign gastric ulcer
3.3	40	Hiatus hernia
1.6	20	Gastric outlet obstruction
31.6	380	Total

All the patients with positive OGD findings postponed from surgery wait for medical treatment and follow up for a minimum period of 6 months, 180 (15%) patients of them had recurrence or persistence of symptoms and they underwent OGD after they take medication and they allowed to do surgery only after normal OGD ensured, the remaining 200 patients (16%) showed no recurrence of symptoms for six months of follow up and surgery was cancelled.

Discussion

Laparoscopic cholecystectomy is indicated for patients with symptomatic cholelithiasis, and it is now the gold standard procedure and, but some of the patients had persistence of pain post cholecystectomy for unknown reason [13]. This pain may be due to peptic ulcer disease, gastritis or other upper gastrointestinal pathologies which have been missed because of overlapping of symptoms in the presentation of such patients and patients with symptomatic cholelithiasis [14,15].

Although abdominal sonography and other routine preoperative investigation were usually done in all these patients with symptomatic cholelithiasis, but it cannot give a clear clinical picture about the presence of any of the upper gastrointestinal pathologies. So further confirmation by oesophagogastroduodenoscopy is mandatory to rule out such problems that may cause preoperative pain or other symptoms, which may persist postoperatively if not treated properly. Some authors suggested that before getting diagnosed with gallstones, patients may have previously undiagnosed functional gut disease [16].

In this study 120 (10%) patients were found to have a peptic ulcer disease, and symptoms of these patients would aggravate by many reasons like fasting before surgery, stress of surgery and post-operative analgesia specially NSAIDS if needed as a pain killer. So, all these sufferings can be minimized and their surgery postponed after they underwent a preoperative OGD to exclude these pathologies and the proper treatment is prescribed.

In other similar studies, researchers found that OGD must precede an elective cholecystectomy and they recommend a change in the plan of treatment because of OGD findings [17-21].

In the present study 380 (31.6%) patients had a positive endoscopic finding, which is also observed in other similar study by Dietrich H, et al. (1990) [18], who found that 31% of patient had a positive OGD findings resulting in changing the plan of therapy. In a study performed by Schwenk W, et al. (1992) [19], they found that 345 (30.1%) patients) had a positive OGD findings of upper gastrointestinal pathologies.

In our study peptic ulceration was found in 120 (10%) patients

as the main OGD findings, Sosada K, et al. (2005) [21], suggested that pain in asymptomatic cholelithiasis is due to peptic ulcer so he recommends routine use of OGD. In other similar studies by Thybusch A, et al. (1996) [20], they found that gastritis is the main OGD findings in (25.7%), and he also recommends change of the plan of therapy by proper medication and cancellation of surgery [22].

Rashid F, et al. (2010) [15], found that the routine use of preoperative OGD may reduce the post-operative persistence and recurrence of symptoms and decrease the overall cost of unneeded laparoscopic cholecystectomy.

In summary the routine use of preoperative OGD of our patients had changed the treatment plan due to the detection of other upper gastrointestinal pathologies which may give a similar clinical picture, thereby it ensures the patient safety and reduce the rate of unneeded laparoscopic cholecystectomy in patients with cholelithiasis.

Conclusion

The routine uses of OGD aid in the diagnosis of hidden upper gastrointestinal pathologies which lead to changes in the management plan in about one third of the patients with cholelithiasis as the clinical picture and the symptoms may overlap. This would help in decreasing the rate of unneeded laparoscopic cholecystectomy and thereby decreasing the expected postoperative persistence or recurrence of symptoms.

Conflict of Interest

The authors declare no conflict of interest.

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