Research Paper Medical Science

Routine Upper Gastrointestinal Endoscopy Before Cholecystectomy

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ABSTRACT

Dyspepsia is a common symptom all over the world. Gall stones are common in western world but are also commonly seen in northern India. Presence of gall stones on ultrasound is often blamed for symptoms of dyspepsia and both physicians and patients are often reluctant to investigate further. There remains a subset of patients who continue to have persisting symptoms after the surgery and contributes to post cholecystectomy syndrome. Various studies have studied the role of routine Upper Gastrointestinal Endoscopy (UGI Endoscopy) before offering cholecystectomy to the patient. However, UGI Endoscopy is not readily available in remote areas of India and is more invasive than ultrasound and often patients are apprehensive to undergo a UGI Endoscopy. With this study we tried to study the outcome in patients who selectively underwent UGI Endoscopy versus routine UGI Endoscopy before cholecystectomy.

KEYWORDS Endoscopy, cholecystectomy, routine, dyspepsia

Introduction:
Dyspepsia is a common problem worldwide and accounts for significant morbidity affecting daily life especially in productive years. Various causes of dyspepsia have been described in the literature ranging from benign conditions to malignancies of the GI tract.

Peptic ulcer disease, Gastroesophgeal Reflux disease, biliary tract disease and gastric malignancy are common conditions causing dyspepsia. (1)

Gall stones are common in developed societies and around 10 to 15% of American population has or will have gall stone disease. (2)

Not many population based studies are available from India to reflect the true incidence of the gall stone disease. In a study published in 1989 from Kashmir, the prevalence of gall stone in general population was over 6%, while it was around 3% in men and around 9% in women. (3) Another study published in 2000 from New Delhi, the incidence of gall stones was found to be 4.3%. It also highlighted the difference in incidence of gall stones between north Indian and south Indian population. (4)

Although gall stones are frequently asymptomatic, cholecystectomy is advisable for symptomatic gall stone disease. (5) However, what constitutes a symptomatic gall stone disease remains debatable.

Patients with cholecystitis, associated CBD stones, gall stone pancreatitis, thickened gall bladder wall, GB polyp and suspicion of GB malignancy are indications for cholecystectomy and such patients are more reliably treated by cholecystectomy in comparison to patients who have vague upper abdominal symptoms of dyspepsia.

However, in other patients symptoms of dyspepsia cannot always be attributed to gall stones and the patient may or may not have resolution of symptoms after surgery.

Some of such patients continue to have symptoms of dyspepsia after cholecystectomy and cause what is commonly known as post cholecystectomy syndrome. It is defined as a complex of heterogeneous symptoms, consisting of upper abdominal pain and dyspepsia, which recur and/or persist after cholecystectomy. (6) The incidence of post cholecystectomy syndrome varies widely in different studies and is between 6 to 34%. (7,8,9)

The aim of this study was to study the use of selective versus routine Upper Gastrointestinal Endoscopy (UGI Endoscopy) to identify other treatable causes in the setting of dyspepsia and clinical outcome of such intervention.

Methods
The study was done at IIMS&R, Lucknow to analyse the data of patients undergoing cholecystectomy from May 2015 to October 2015.

In the first half of the study from May 2015 till July 2015, only selected patients underwent UGI Endoscopy before being subjected for cholecystectomy. Most of these patients presented to the surgical department for surgery and UGI Endoscopy was done before surgical assessment.

In the second half of the study from Aug 2015 to October 2015, all patients undergoing cholecystectomy were subjected to UGI Endoscopy.

Follow-up visits were done at 1 month and 3 months from the date of discharge.

Patients who had missed any of the follow ups were not included in the study.

Group 1, 104 patients underwent cholecystectomy. Of these, 23 patients had UGI Endoscopy before cholecystectomy. One patient had Carcinoma of stomach diagnosed on UGI Endoscopy and was managed accordingly and excluded from this study

However, follow up data was complete for only 90 of them and of these 20 patients were those who had undergone UGI Endoscopy too and these patients were included to be a part of this study.

Group 2, 108 patients underwent cholecystectomy. UGI Endoscopy was offered to all the patients. Of these, 12 patients refused UGI Endoscopy and were not included for the purpose

of data analysis for the study. Remaining 96 patients underwent both UGI Endoscopy and cholecystectomy.

Follow-up data was complete for only 86 patients and were included in the study.

Irrespective of the group, patients with positive UGI Endoscopy findings were initially treated according to the finding and then subjected to cholecystectomy.

Results:
There were total of 176 patients, Group 1 – 90 and group 2 – 86.
There were 150 females and 26 males. The gender ratio was 5.8:1 in favour of females.
The gender ratios were comparable in both the groups.
Group 1, female to male ratio was 5.5:1 with 77 females and14 males.
Group 2, female to male ratio was 6:1, with 73 females and 12 males.
Age range was 19 to 68 years in group 1 and 19 to 62 years in group 2. Mean age was 42 years in group 1 and 41.6 years in group 2.

Among group 1, out of 20 patients who underwent UGI Endoscopy, only 6 patients had positive findings. Positive findings included inflammation of the stomach which was biopsy proven, gastric ulcer, duodenal ulcer and Gastroesophageal reflux disease. These patients were treated based on their UGI findings and then subjected to cholecystectomy after completion of treatment.

Among group 2, out of the 86 patients who underwent UGI Endoscopy, 27 patients had positive findings. Positive findings included inflammation of the stomach which was biopsy proven, gastric ulcer, gastric erosions, duodenal ulcer and Gastroesophageal reflux disease. All the patients who had positive findings were treated accordingly and subjected to cholecystectomy after completion of therapy.

Follow- up was done at 1 and 3 months from the date of discharge.

Among the patients of group 1, 67 (74.45) patients had relief of symptoms at 3 months.

Among the patients of group 2, 66(76.7%) patients had relief of symptoms at 3 months.

The difference in resolution of symptoms was not statistically significant (p value > 0.05).

Discussion:
Patients who present with epigastric pain or symptoms of dyspepsia are often first subjected to ultrasound of abdomen. Ultrasound of abdomen is readily available, non invasive and cheap investigation.

Not all patients who have gall stones on ultrasound are symptomatic for them and some of them will have symptoms due to some other disease mainly upper gastrointestinal pathologies. However, very often whenever gall stones are identified on ultrasound many doctors do not investigate for other causes of dyspepsia and this is in part also due to reluctance of patients to undergo UGI Endoscopy. General population is still apprehensive of undergoing a UGI Endoscopy, mainly due to presumed discomfort during the procedure.

UGI Endoscopy, although an invasive procedure and carries risk, however, the risk of UGI Endoscopy is far less than performing an unnecessary cholecystectomy for an asymptomatic patients. Cholecystectomy carries with it many risks along with risk of Bile Duct Injury. However, 'another risk' of performing cholecystectomy is failure to treat the per-operative symptoms of the patients and leads to post-cholecystectomy syndrome. Many causes have been attributed for developing post cholecystectomy syndrome. Some of the causes are related to the biliary symptoms and many more to associated pathologies including upper gastrointestinal diseases and also other abdominal complaints.

Since there is significant overlap of symptoms in gall stones and other upper digestive tract symptoms, it is often difficult to diagnose pre-operatively the subset of patients who will benefit from a cholecystectomy. Patients with recurrent biliary colics, acute cholecystitis, CBD stones and gall stone pancreatitis are more likely to benefit after cholecystectomy. Another subset of patients with thickened gall bladder wall, suspicion of GB malignancy, GB Polyp may also have benefit from cholecystectomy over the long run. However, it is the subset of patients who present with chronic dyspepsia symptoms, in whom the role of cholecystectomy is not clear. Some of them achieve symptom relief after a cholecystectomy, although at the risk of undergoing a invasive procedure.

If co-existing pathologies can be diagnosed pre-operatively and the patient be counselled and treated for them, a cholecystectomy may not be necessary if them, if they achieve a symptom relief or at least be counselled regarding persistence of symptoms despite a cholecystectomy.

Various authors have studied the role of routine UGI Endoscopy before cholecystectomy (10,11,12,13). Some authors also advocate the role of selective UGI Endoscopy before performing cholecystectomy.(14)

Conclusion:
Cholelithiasis presents with different manifestations and dyspepsia is one among them. However, not all patients who are diagnosed with gall stones on ultrasound are symptomatic to them. With increased availability of ultrasound, more patients are diagnosed with gall stones and with advent of laparoscopic cholecystectomy; more patients opt to undergo surgery. Post cholecystectomy syndrome continues to haunt the surgeons and patients alike when the symptoms fail to resolve after the surgery. However, pre operative UGI endoscopy to rule out other causes of dyspepsia helps in identifying the patients with treatable causes. Although routine use of UGI endoscopy before cholecystectomy will identify more number of patients with upper digestive tract pathologies but lack of widespread facility for endoscopy in remote areas and added financial burden to the patient prohibit the routine use. Hence, a selective use of UGI endoscopy maybe a more viable option. Moreover, patients who continue to have symptoms despite cholecystectomy can always be offered UGI Endoscopy after the surgery and suitably treated.

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