

AN EPIDEMIOLOGICAL PROSPECTIVE STUDY OF POSTCHOLECYSTECTOMY SYNDROME

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ABSTRACT

BACKGROUND AND AIMS

Cholecystectomy is the standard treatment for symptomatic gall stone disease. This study is aimed to assess the effect of the surgery on patients' symptoms.

MATERIALS AND METHODS

Eighty patients undergoing Cholecystectomy between September 2013 to February 2015 were evaluated using standard questionnaires in Study conducted on patients admitted in Surgical units in Maharaja Yashwantrao Hospital and MGM Medical College, a tertiary level care centre in Central India.

RESULTS

In this prospective study of 80 symptomatic gallstone disease patients with two or more symptoms pre-operatively the incidence of Postcholecystectomy Syndrome was found out to be 30%. All pain and non-pain symptoms were significantly reduced post-operatively except diarrhea.

KEYWORDS

Postcholecystectomy Syndrome.

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INTRODUCTION: The term postcholecystectomy syndrome (PCS) describes the presence of symptoms after cholecystectomy. These symptoms can represent either the continuation of symptoms thought to be caused by the gallbladder or the development of new symptoms normally attributed to the gallbladder. PCS also includes the development of symptoms caused by removal of the gallbladder. In general, PCS is a preliminary diagnosis and should be renamed relevant to the disease identified by an adequate workup. In 1947, Womack and Crider^[1] first described PCS, defining it as the presence of symptoms after cholecystectomy. These symptoms may actually represent either.

- (1) The continuation of symptoms that had been interpreted as resulting from pathology of the gallbladder or
- (2) The development of new symptoms that might normally be attributed to the gallbladder. PCS is also the development of symptoms, such as gastritis and diarrhea, caused by removal of the gallbladder.

It is commonly accepted that removal of the gallbladder is the best treatment for symptomatic gallstone disease. However, less focus has been on patient selection and

typical or common symptoms of this disease in order to understand prevailing symptoms after surgery.^[2,3]

The true incidence of PCS depends to a great degree on the indication for cholecystectomy, absence of other symptoms related to other systems at the time of surgery and a careful post-operative followup.

These factors explain, at least in part, the wide discrepancy in the reported incidence (5-40%) of PCS.^[4]

METHOD: Study was conducted on patients admitted in Surgical units in Maharaja Yashwantrao Hospital and MGM Medical College, a tertiary level care centre in Central India. All patients who underwent Cholecystectomy either in Emergency or Elective setting were included in the study whereby a proper preoperative history was taken and note was made of the indication of cholecystectomy. Patients were followed and intra-operative data was analysed. Postoperative follow-up of up to 6 months was done for assessment of symptoms developing as a result of cholecystectomy. Postoperative follow up was done by telephonic conversation and OPD follow-up.

Inclusion Criteria: All Patients undergoing Cholecystectomy in Maharaja Yashwantrao Hospital, Indore.

Exclusion Criteria: All patients undergoing Cholecystectomy who have concomitant Upper GI pathology diagnosed clinically or through investigations, Patients who lost to follow up, Patients who did not consent for the study and patients diagnosed to have Biliary malignancy.

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RESULTS: The incidence of Postcholecystectomy Syndrome in Maharaja Yashwantrao Hospital, Indore was found out to be 30 percent in our study. Out of 80 patients 17 were males (21.25%) and 63 (78.75%) were females. 4 out of 17 males had postcholecystectomy symptoms and 20 out of 63 females had symptoms.

	Postcholecystectomy symptoms	Total number
Males	4	17
Females	20	63

Table 1

The Chi-Square test statistic is 0.2407 and the p Value is 0.6237. This result is not significant at $p < 0.05$. This means there is no significant difference between the incidence of postcholecystectomy syndrome between males and females.

The number of patients of Postcholecystectomy syndrome in Open procedure was 7 out of 23 i.e 30.43% and 17 out of 57 i.e. 29.82% in Laparoscopic procedure.

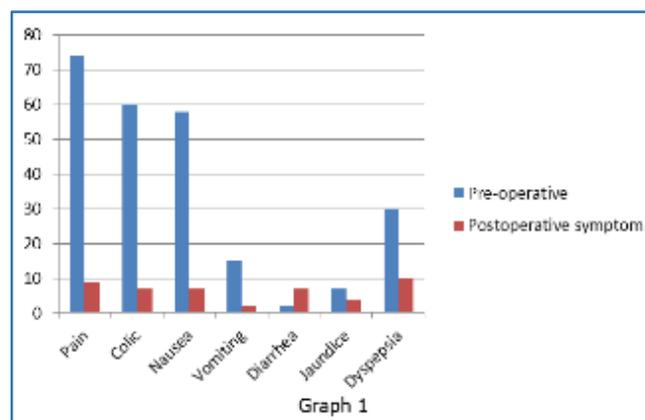
Type of Surgery	Postcholecystectomy Symptoms	Total Number
Open	7	23
Laparoscopic	17	57

Table 2

The Chi-square statistic is 0.0016 and the p value is 0.9684. This result is not significant at $p < 0.05$. Hence there is no significant difference between the incidence of PCS in Open or Laparoscopic cholecystectomy.

Symptom	Pre-operative	Postoperative symptom	%
Pain	74	9	12.16
Colic	60	7	11.66
Nausea	58	7	12.06
Vomiting	15	2	13.33
Diarrhea	2	7	100
Jaundice	7	4	57.14
Dyspepsia	30	10	33.33

Table 3



DISCUSSION: This study has confirmed that patients with symptomatic gall stone disease exhibit a wide spectrum of symptoms, many of which are not relieved by cholecystectomy. In this prospective study of 80 symptomatic gallstone disease patients with two or more symptoms preoperatively, cholecystectomy led to complete absence of symptoms in 70%. Hence the incidence of Postcholecystectomy Syndrome is 30% in our present study. Furthermore, the symptomatic outcome is not influenced by the surgical access used. The number of patients of Postcholecystectomy syndrome in Open procedure is 30.43% and 29.82% in Laparoscopic procedure. Thus there was no significant difference in the incidence of Postcholecystectomy Symptoms in Open or Laparoscopic Cholecystectomy. ($P < 0.05$) This finding is similar to almost all other studies like studies by Velpen, et al^[5] and by Wilson and Mc Intyre.^[6] The most common indication of cholecystectomy was Biliary Colic due to Cholelithiasis (52.5%) and then Chronic Cholecystitis (27.5%) in the present study. It was observed that patients who had symptoms for long periods of time had more chances of persistence of symptoms in the post-operative period. This finding is similar to most studies. The average age of patients who had Postcholecystectomy symptoms was 44 years.

The ratio of males and females presenting with symptoms of gall bladder was 21.25% males to 78.75% females i.e. 1:3.5. This finding is similar to findings by Luman, et al^[7] who found 80% females and also by Niranjana, et al^[8] who found the ratio to be 1:4. Malte Schmidet, et al^[9] has reported that females tend to have more post-operative symptoms as compared to males. But most other studies report similar incidence of postcholecystectomy symptoms between males and females. The difference in the incidence of Postcholecystectomy syndrome between males and females was statistically insignificant in our study. Dyspepsia was the most common residual symptom after cholecystectomy and persisted in 33.33% patients. Diarrhoea was one symptom which was present in 7 patients postoperatively whereas only 2 patients had it preoperatively. Pain, Biliary colic and Nausea was resolved in majority of patients and persisted in only 11-12 % patients. According to Lublin, et al^[10] all pain and non-pain symptoms were significantly reduced postoperatively except diarrhoea. Our study has similar results. It was observed that patients who had symptoms for long periods of time had more chances of persistence of symptoms in the post-operative period. It was also observed that the average age of patients who had Postcholecystectomy symptoms was 44 years. Based on the severity of symptoms in our study 70% had no symptoms, 17.5% had mild symptoms, 10% had moderate symptoms and 2.5% had severe symptoms. Peterli, et al^[11] found that 65% of patients had no symptoms, 28% had mild symptoms, 5% had moderate symptoms, and 2% had severe symptoms.

CONCLUSION: All patients should be preoperatively counselled about the risk of persistence of some non-pain symptoms after cholecystectomy. Patients should be worked up carefully and their complaints listened to carefully before committing the patient to an operation (and its consequences and sequelae) he did not need in the first place.

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