

Original Article

Cholecystectomy and its Role in Diagnosis of Gall Bladder Cancer: An Observational Study

Jagdish Kumar Mutreja¹, Shashi Kumar Chaurasiya²

¹Assistant Professor, ²Senior resident, Department of Surgery, Sharda School of Medical Sciences & Research, Greater Noida, U.P., India

ABSTRACT:

Background: Gallbladder removal is one of the most commonly performed surgical procedures. It is one of the most minimally invasive techniques called as Cholecystectomy. There are reports which showed that gallbladder cancer was incidentally diagnosed during or after laparoscopic cholecystectomy performed for gallstone disease.

Aim: To evaluate the impact of incidental gallbladder cancer on surgically treated cholecystectomy patients.

Material and Method: This study included all laparoscopic cholecystectomy patients. Patients with incidentally diagnosed gallbladder cancer were recorded, and the clinical and demographic characteristics of these patients were reviewed. Age group selected for the study was 40 to 80 years. Sample included in study were 80 in number.


Result: In our study out of 80 cases examined, 78 were included in the study. We observed 35 cases were diagnosed preoperatively and 43 cases were diagnosed postoperatively. Polyposis lesion was found in 74.2% cases i.e. n= 26 and 9 cases reported non Polyposis lesion i.e. 25.7%. Whereas in Group 2 i.e. suspected diagnosis of gall bladder cancer 43 cases were observed (55.1%).

Conclusion: In our study we didn't observed an increase of incidentally diagnosed gallbladder cancer in patients with increase in laparoscopic cholecystectomies. Early diagnosis and accurate surgical treatment are essential factors to obtain good results in incidental gallbladder cancer.

Key words: Cholecystectomy, Gall bladder cancer, diagnosis, incidence

Correspondence Address: Dr. Shashi Kumar Chaurasiya, Senior resident, Department of Surgery, Sharda School of Medical Sciences & Research, Greater Noida, U.P., India

This article may be cited as: Mutreja JK, Chaurasiya SK. Cholecystectomy and its Role in Diagnosis of Gall Bladder Cancer: An Observational Study. J Adv Med Dent Scie Res 2017;5(12):32-34.

Access this article online	
Quick Response Code 	Website: www.jamdsr.com
	DOI: 10.21276/jamdsr.2017.5.12.10

INTRODUCTION:

The gallbladder is a pear-shaped organ that rests beneath the right side of the liver. Its main purpose is to collect and concentrate a digestive liquid i.e. bile produced by the liver. Bile is released from the gallbladder after eating, aiding digestion. Gall bladder cancer is one of the rare neoplasms. The incidence rate reported in the literature is 0.3-1.5%.^{1,2} The treatment involved for Gallbladder cancer is surgical removal, it is usually performed with minimally invasive techniques and the medical name for this procedure is "Laparoscopic Cholecystectomy".³

The management of digestive tract tumor with the help of laparoscopic surgery is increasingly accepted though out the world.⁴The management is often difficult so far no guidelines have been provided. Gallbladder carcinoma is also characterized by an extremely poor prognosis. Tis and T1a i.e. early stages of GBC, cholecystectomy may be adequate treatment. However in more advanced cases reoperation is suggested.

So we aimed evaluate the impact of incidental gallbladder cancer on surgically treated cholecystectomy patients.

MATERIALS AND METHOD:

The Sample size we selected for the present study was 80 patients aged 40 to 80 years. Out of 80 patients 45 were males and 35 were females. The present study was conducted in department of general surgery, over a period of 1 year. Inclusion criteria involved: GB cancer diagnosed during or after cholecystectomy that was not suspected at the preoperative stage. Exclusion criteria involved those patients who had suspected gall bladder cancer at preoperative evaluation. Ethical clearance was obtained before beginning the study. A detailed description regarding the investing procedures was explained to patients and attends. A written informed consent was obtained from patients/ caregivers.

The demographic variables like age, gender, ethnic etc., clinical variables like clinical presentation, symptoms, information on type of surgery, elective or urgent surgery, intra-operative complications, histology), and surgical

outcome were recorded. The study sample was divided in two groups:

Group 1: incidental diagnosis of GBC

Group 2: suspected diagnosis of GBC

RESULTS:

The present study was conducted in department of general surgery, over a period of 1 year. A total of 80 patients were selected for the study. Out of 80, 45 were males i.e. 56.2% whereas 35 females i.e. 43.7% (Table 1). The age group selected for our study was 40 to 80 years. Out of 80 patients selected for the study GBC was diagnosed in 78 patients, 32 women and 40 males. The male to female ratio was 1.2:1 and the mean age was 54 years (range: 40-80 years). On detailed examination it was found that out of 78 patients a preoperative diagnosis

showed 35 cases were diagnosed preoperatively and 43 cases were diagnosed postoperatively (Table 2).

In group 1 i.e. incidental diagnosis of gall bladder cancer 35 cases were observed (44.8%). Polyposis lesion was found in 74.2% cases i.e. n= 26 and 9 cases reported non Polyposis lesion i.e. 25.7%. Whereas in Group 2 i.e. suspected diagnosis of gall bladder cancer 43 cases were observed (55.1%). 20 cases out of 43 were observed to have Polyposis lesion i.e. 46.5% and 23 were found to be non Polyposis lesion i.e. 53.4%. On histological grading it was found that in Group 1: 34.2% cases were reported to be grade 1 and 65.7% i.e. 23 cases were diagnosed as grade 2 however no cases were found to be in grade 3 stages (Table 2). In Group 2: 5 cases were reported to be in Grade 1 i.e. 11.6% cases (Graph 1). 32.5% cases were found to be in grade 2 i.e. 14 cases however majority of patients showed grade 3 lesions i.e. 55.8% (n=24).

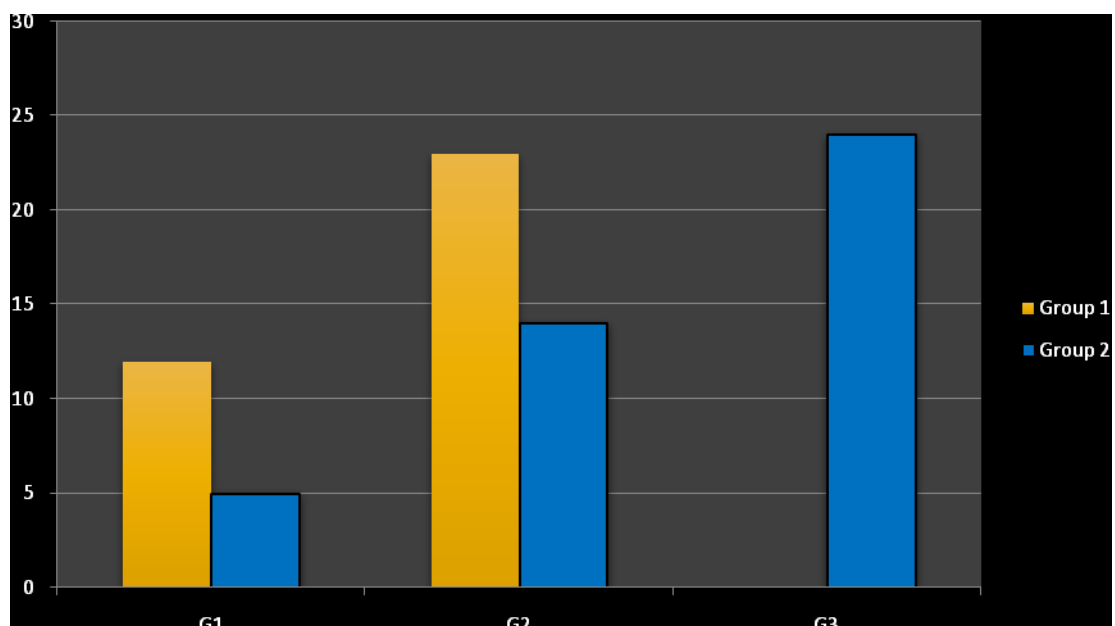
Table 1: Patients demographic details

Gender	n	Percentage
Males	45	56.2%
Females	35	43.7%
TOTAL	n = 125	100%

Table 2: Patient characteristics

Characteristics	IGBC	NIGBC
No of patients	35	43
Polyposis lesion	26 (74.2%)	20 (46.5%)
Non Polyposis lesion	9 (25.7%)	23 (53.4%)
Histopathological grade		
G1	12 (34.2%)	5 (11.6%)
G2	23 (65.7%)	14 (32.5%)
G3	0	24 (55.8%)

Graph 1: Histopathological Observation



DISCUSSION:

First laparoscopic cholecystectomy was performed by Mouret in the year 1988.⁵ The widespread use of laparoscopic cholecystectomy has recently led to discovery of gall bladder cancer at an earlier stage, which can further help in treatment and outcome of disease. Duffy A et al reported that gall bladder cancer cases are occasionally discovered during or after laparoscopic cholecystectomy for benign disease like gallstones.⁶ Authors reported that GBC is an incidental finding in 0.25%-3% of patients.^{6,7} In present study a total of 80 patients were examined, 78/80 reported to be either having incidental diagnosis or suspected diagnosis of GBC.

According to the literature present few authors suggested that female gender, obesity, age over 60 years old, and cholelithiasis could be the possible major risk factors for the disease. However current study is not suggestive of such findings. We focused on incidentally observed gall bladder cancer and suspected diagnosis of GBC. We found that 44.8% cases were observed to be incidentally found and 55.1% cases were found to be suspected diagnosis. Cavallaro A et al reported the ratio between incidental and non incidental cases was 9/19 in their study.⁸

The median survival rate according to the literature varies between 8.1 and 68 months (range 3-100 months); in study conducted by Ferrarese AG et al median survival was found to be 34 months.⁹ In present study the survival rate was found to be 28 months (range 25-50 months) which is in agreement which the range reported in literature. Incidence of gall bladder cancer was reported to be higher among females.¹⁰ in our study out of 78 patients 34 were females. Various authors have reported that Symptoms of gall bladder cancer are aspecific and the most important prognostic factor is pathological stage, we totally agree with the authors based on the examination all our patients were asymptomatic.¹⁰⁻¹²

CONCLUSION:

Incidence of gall bladder cancer is found to be increasing over years and years. Incidental Gall bladder cancer can be diagnosed at an early stage and can have a good prognosis Laparoscopic cholecystectomy is considered to be adequate treatment at an earlier stage. In current study rate of suspected gall bladder cancer was found to be more than incidental gall bladder cancer. Laparoscopic cholecystectomy is the gold standard for surgical treatment of benign GB diseases. However in current study Gallbladder cancer was diagnosed during or after cholecystectomy at a low incidence rate.

REFERENCES:

1. Clemente G, Nuzzo G, De Rose AM, Giovannini I, La Torre G, Ardito F, Giulianti F. Unexpected gallbladder cancer after laparoscopic cholecystectomy for acute cholecystitis: a worrisome picture. *J Gastrointest Surg.* 2012. pp. 1462–8.
2. Benoist S, Panis Y, Fagniez PL. Long-term Results of the curative Resection for carcinoma of the Gallbladder. *The Am J Surg.* 1998;175:118–22.
3. Weiland S. T., Mahvi D. M., Niederhuber J. E., et al. Should suspected early gallbladder cancer be treated laparoscopically? *Journal of Gastrointestinal Surgery.* 2002;6(1):50–57.
4. Clinical Outcomes of Surgical Therapy Study Group. A comparison of laparoscopically assisted and open colectomy for colon cancer. *The New England Journal of Medicine.* 2004;350(20):2050–2059.
5. Mühe E. Long-term follow-up after laparoscopic cholecystectomy. *Endoscopy.* 1992;24:754-758.
6. Duffy A, Capanu M, Abou-Alfa GK, Huitzil D, Jarnagin W, Fong Y, D'Angelica M, Dematteo RP, Blumgart LH, O'Reilly EM. Gallbladder cancer (GBC): 10-year experience at Memorial Sloan-Kettering Cancer Centre (MSKCC) *J Surg Oncol.* 2008;98:485–489.
7. Shih SP, Schulick RD, Cameron JL, Lillemoe KD, Pitt HA, Choti MA, Campbell KA, Yeo CJ, Talamini MA. Gallbladder cancer: the role of laparoscopy and radical resection. *Ann Surg.* 2007;245:893–901.
8. Cavallaro A¹, Piccolo G, Panebianco V, Lo Menzo E, Berretta M, Zanghi A, Di Vita M, Cappellani A. Incidental gallbladder cancer during laparoscopic cholecystectomy: managing an unexpected finding. *World J Gastroenterol.* 2012 Aug 14;18(30):4019-27
9. Ferrarese AG, Solej M, Enrico S, Falcone A, Catalano S, Pozzi G, Marola S, Martino V. Diagnosis of incidental gallbladder cancer after laparoscopic cholecystectomy: our experience. *BMC Surg.* 2013;13 Suppl 2:S20
10. Bertran E, Heise K, Andia ME, Ferreccio C. Gallbladder cancer: Incidence and survival in a high-risk area of Chile. *Int J Cancer.* 2010;127:2446–54.
11. Chan SY, Poon RTP, Lo CM, Ng KK, Fan ST. Management of Carcinoma of Gallbladder: A Single-Institution Experience in 16 years. *J Surg Oncol.* 2008;97:156–64.
12. Liang JW, Dong SX, Zhou ZX, Tian YT, Zhao DB, Wang CF. et al. Surgical management for carcinoma of the gallbladder: a single- institution experience in 25-years. *Chin Med J.* 2008;121:1900–5.
13. de Aretxabala XA, Roa IS, Mora JP, Orellana JJ, Riedeman JP, Burgos LA, Silva VP, Cuadra AJ, Wanebo HJ. Laparoscopic cholecystectomy: its effect on the prognosis of patients with gallbladder cancer. *World J Surg.* 2004;28:544–547