ORIGINAL ARTICLE

Frequency of Carcinoma in Post-Cholecystectomy Biopsy Specimens of Gall Bladder

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ABSTRACT

Background: Gallbladder stones disease is a common with a prevalence of 10-15% in the USA and about 16% in Pakistan and cholecystectomy is the most common major abdominal surgical procedure performed worldwide. Long history of cholelithiasis and chronic cholecystitis are the established risk factors for carcinoma gall bladder, in most of the cases carcinoma gall bladder is an incidental finding during or after surgery for symptomatic gall stones disease.

Aim: To determine the frequency of carcinoma of gall bladder in patients undergoing cholecystectomy.

Methods: This prospective (descriptive) study was carried out at Surgical B Unit of Postgraduate Medical Institute, Lady Reading Hospital, Peshawar, for the period of one year, from 15-03-2013 to 15-03-2014. Total 206 patients of symptomatic gallstones disease presented in the study period and underwent cholecystectomy were included in the study to find out frequency carcinoma in gall bladder specimens after cholecystectomy. All the patients above age 14 who underwent cholecystectomies were included in study.

Results: Total of 206 patients of symptomatic gallstones disease who underwent cholecystectomy in the study period were included in the study The age of the patients ranged from 17 to 70 years with mean of 44.24± SD 1.23 years. Most of the patients with symptomatic gall stones disease were female in the age range of 41-50 years. Open cholecystectomy was the commonly performed surgical procedure. Out of total cases presented with symptomatic gall stones disease, 6 (2.91%) patients were having adenocarcinoma gall bladder on histopathology. Carcinoma gall bladder was common in female gender with female to male ratio of 5:1 and the commonly affected age group was 51-60 years.

Conclusion: Gall bladder cancer is an aggressive malignancy only its early detection and prompt curative surgery can improve survival. This is only possible by adopting the protocol of sending every gall bladder specimen for histopathological examination.

Keywords: Carcinoma gall bladder, Cholecystectomy, Biopsy specimen

INTRODUCTION

Gallbladder stones disease is a common with a prevalence of 10-15% in the USA and about 16% in Pakistan[1,2] and cholecystectomy is the most common major abdominal surgical procedure performed worldwide[3]. Long history of cholelithiasis and chronic cholecystitis are the established risk factors for carcinoma gall bladder[3,4]. In most of the cases carcinoma gall bladder is an incidental finding during or after surgery for symptomatic gall stones disease. Carcinoma gall bladder is not uncommon malignancy related to digestive tract and is commonest primary tumor of billiary tract[5,7]. This cancer is most frequent in middle to old age females[8,9].

The incidence of gall bladder cancer varies by geographic region and racial ethnic group. The highest incidence of carcinoma of gallbladder is in Chileans, American Indians, and in parts of North India[10,11]. The incidence of this cancer in patients of symptomatic gall stones disease falls within the range of 6-28% in Pakistan as mentioned in literature[12,13]. The exact etiology of this disease is not known but is thought to result from interplay between genetic and acquired factors.[14,15] Gall bladder stones and chronic inflammation of gall bladder wall are considered common risk factors for this tumor.[3,4] There are no specific clinical features of this disease in early stage rather patients present with signs and symptoms of cholelithiasis or any other benign condition[16].

Gall bladder cancer is very aggressive cancer and carries bad prognosis only early detection and prompt management can improve survival.The rationale of this study was on this fact that only histopathological analysis of gall bladder specimen after cholecystectomy can yield this important information about the diagnosis to be made earlier and to have better opportunity for cure.

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PATIENTS AND METHODS

This prospective (descriptive) study was conducted in Surgical B Unit of Postgraduate Medical Institute, Lady Reading Hospital, Peshawar for the period of one year, from 15-03-2013 to 15-03-2014. Total 206 patients of symptomatic gallstones disease presented in the study period and underwent cholecystectomy were included in the study to find out frequency carcinoma in gall bladder specimens after cholecystectomy. All the patients above age 14 who underwent cholecystectomies were included in study. All those cases with known pathology i.e. mass Gall Bladder or findings suggestive of malignancy and preoperatively or already diagnosed cases of gall bladder carcinoma were excluded. On admission to the unit, detailed history was taken and thorough general physical and systemic examination was performed and recorded on a proforma along with demographic data of the patient i.e. gender, age in years, age group and socioeconomic status. Complete blood counts and serology for HBV, HCV and were done in all patients. ECG and chest x-ray were performed where needed. After thorough work up written informed consent was taken from every patient for procedure and aneasthesia.All the patients were kept nil by mouth from 12:00 mid night. Each patient was given intravenous antibiotic half an hour before induction. Cholecystctomies were performed either laparoscopically or via conventional open technique. Gall bladder specimens of all the patients were sent for histopathological evaluation after surgery. Follow up of the patient was done at two weeks, two months and six months after surgery. All the information was recorded on predesigned proforma and data analysis was done through SPSS version 16.

RESULTS

Total 206 patients of symptomatic gallstones disease who underwent cholecystectomy in the study period were included in the study, The age of the patients ranged from 17 to 70 years with mean of 44.24±1.23 years. Most of the patients with symptomatic gall stones disease were female in the age range of 41-50 years followed by age range of 51-60 years. Female patients were 174 and male patients were 32 with female to male ratio of 5.43:1 (Tables 1-2). The total number of laparoscopic and open cholecystectomies performed in the study is shown in the Table 3. Thus open cholecystectomy was the commonly performed surgical procedure. Carcinoma gall bladder was common in female gender with female to male ratio of 5:1 and the commonly affected age group was 51-60 years (Tables 4-5). Only 6 (2.9%) patients having adenocarcinoma gall bladder on histopathological examination of gall bladder specimens after cholecystectomy. Among these cancer patients 4 (66.6%) were of papillary type and 2 (33.3%) were non papillary type while 5 (83.33%) cases were in stage 1a and 1(16.7%) case was of stage 1b. Our 1 patient that was in stage 1b was sent to hepatobiliary surgeon for further management in specialist center while for the rest of the 5 cases cholecystectomy was optimal treatment.

Table 1: Age grouping of gall stones disease patients(n=206)

Age (years)	No.	%
11 – 20	3	1.5
21 – 30	32	15.5
31 – 40	50	24.3
41 – 50	61	29.6
51 – 60	45	21.8
61 - 70	15	7.3

Table 2: Distribution of patients by gender (n=206)

Gender	No.	%
Male	32	15.5
Female	174	84.5

Table 3: Types of surgery performed (n=206)

Type of surgery	No.	%
Open cholecystectomy	135	65.5
Laparoscopic cholecystectomy	71	34.5

Table 4: Number of carcinoma gall bladder by gender

Gender	No.	%
Male (n = 31)	1	3.3
Female (n = 169)	5	2.9

Table 5: Frequency of carcinoma gall bladder by age

Age (years	No.	%
11 – 20	-	-
21 – 30	-	-
31 – 40	-	-
41 – 50	1	16.7
51 – 60	3	50.0
61 – 70	2	33.3

DISCUSSION

Carcinoma of the gallbladder is although uncommon intra abdominal malignancy but is the commonest cancer of the billiary tree and is usually found incidentally during histopathological evaluation of gall bladder specimen following surgery for the gallstone disease. There are no specific signs and symptoms of this disease in early stages and the diagnosis can be confirmed at this stage, on histopathology of the gallbladder after cholecystectomy.[17]

Gall bladder cancer is very aggressive disease with poor prognosis[18] only detection in early stages

and prompt management can improve survival.[19] In our present study of 206 patients over a period of one year showed carcinoma GB in 6 (2.91%) cases which falls within the range mentioned in literature. [20-24] carcinoma gall bladder was common in the age range of 51-60 years which is in accordance with results of other studies.[25,26] In the present study, carcinoma gall bladder was common in female gender with female to male ratio of 5:1 various other studies also female preponderance.[27,28] In the present study 5 (83.33%) cases were in stage 1a and 1(16.66%) case was of stage 1b. Our one patient that was in stage 1b was sent to hepatobiliary surgeon for further management in specialist center while for the rest of the 5 cases cholecystectomy was optimal treatment. As already discussed that it is very aggressive malignancy complete surgical resection, when performed at an early stage of the cancer, remains the only potential curative treatment because role of other adjuvant therapies is controversial.[21,29]

CONCLUSION

Gall bladder cancer is an aggressive malignancy only its early detection and prompt curative surgery can improve survival, this is only possible by adopting the protocol of sending every gall bladder specimen for histopathological examination.

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