INCIDENTAL GALLBLADDER CARCINOMA IN PATIENTS UNDERGOING CHOLECYSTECTOMY FOR CHOLELITHIASIS

KHALID AHSAN MALIK, MASOOD JAWAID
Department of Surgery, Unit V, Dow University of Health Sciences & Civil Hospital, Karachi

ABSTRACT
Objective: *To find out the frequency of gallbladder cancer after Cholecystectomy for chronic calculous cholesystitis and whether Cholecystectomy has allowed discovery of this deadly disease at an earlier stage.*
Study Design: *Case series.*
Setting & Duration: *Department of Surgery, Peoples Medical College Hospital, Nawabshah from November 1998 to October 2001.*
Methodology: *All patients with chronic cholesystitis due to Cholelithiasis undergoing Cholecystectomy were included and patients with known carcinoma gallbladder were excluded All specimen of gallbladder were sent for histopathology. cases of histopathologically confirmed carcinoma gallbladders were evaluated with descriptive statistics.*
Results: *During the study period total 260 chelocystomies were done for Cholelithiasis. Sixteen (6.15%) were reported to be carcinoma gallbladder. Out of them 4 were males and 12 were females. Most of the patients 8(50%) were in their 5th decade of age. Ultrasound scan revealed thick walled gall bladder in 10(62.05%) patients while polyp in 4(25%) patients. Well differentiated carcinoma is reported in 8(50%) gallbladder specimens. Most of the patients 11(68.75) have pT1 stage on histopathology.*
Conclusion: *Frequency of incidental finding of carcinoma gallbladder is high. Availability of adequate and prompt Cholecystectomy for symptomatic gallstone patients should be effective for secondary prevention and detection and treatment of disease at an early treatable stage.*

KEYWORDS: *Carcinoma Gallbladder, Incidental Finding, Cholecystectomy*

INTRODUCTION

Gallbladder cancer was first described in 1777.[1] More than 230 years later, late diagnosis and absence of effective treatment for many patients remain typical features of this disease.[2] Although relatively uncommon, it is the most frequently encountered malignancy of the biliary system occurring predominantly in elderly women.[3-5] There is a wide discrepancy among sources regarding the epidemiology of gallbladder cancer. Although it is a relatively rare disease, with an annual incidence estimated to be 1 to 2 people per 100,000,[6] it is a highly aggressive malignancy that is associated with approximately 2500 deaths per year.[7]

Risk factors include cholelithiasis, calcified gallbladder wall, adenomatous gallbladder polyps, obesity, estrogen, choledochal cysts and chemical carcinogens.[8] The symptoms related to gallbladder cancer can be relatively nonspecific, with the early symptoms mimicking those of the much more common calculous biliary diseases.[3] Furthermore, gallstones are present in a large proportion of patients with gallbladder cancer. Over 750,000 cholecystectomies are performed annually as a result of gallstone disease,9 and gallbladder cancer is found incidentally in 1% or less of all the cholecystectomies performed.[10,11] We examine frequency of gallbladder cancer after Cholecystectomy for chronic calculous cholesystitis and whether cholecystectomy has allowed discovery of this deadly disease at an earlier stage.

METHODOLOGY

In this case series, all patients with chronic cholesystitis

Correspondence:
Prof. Khalid Ahsan Malik, Professor of Surgery, Unit V, Dow University of Health Sciences & Civil Hospital, Karachi.
Phones: 0300-7052820.
E-mail:khalidahsan@hotmail.com

due to cholelithiasis undergoing Cholecystectomy from November 1998 to October 2001 in the Department of Surgery, Peoples Medical College Hospital Nawabshah were included. Patients with known carcinoma gallbladder were excluded from the study. All specimen of gallbladder were sent for histopathology. Cases of Histopathological confirmed carcinoma gallbladders were evaluated with descriptive statistics used to analyze data for age, gender, ultrasound findings, site of carcinoma, tumor grade and stage.

RESULTS

During the study period total 260 chelocystomies were done for cholelithiasis. Sixteen (6.15%) were reported to be carcinoma gallbladder. Out of them 4 were males and 12 were females with male to female ratio of 1:3. Most of the patients 8(50%) were in their 5th decade of age (Table I). Ultrasound scan revealed thick walled gall bladder in 10(62.05%) patients while polyp in 4 (25%) patients (Table II). Well differentiated tumor is reported in 8(50%) gallbladder specimens (Table II). Stage of the carcinoma gallbladder is also shown in Table II with most of the patients 11(68.75) have pT1 stage.

DISCUSSION

A central finding in all collaborative, population-based, case- control studies was a strong relationship between a history suggestive of previous gallstones or gallbladder disease and the subsequent risk of cancer of the gall bladder.[12] Our results had showed that carcinoma gall bladder was present in 6.15% of gallbladder specimen of patients who were operated for symptomatic gall stones. This is relatively high percentage as compared to the Western literature.[6,13] In Pakistan different studies reported 6-28% frequency of the carcinoma with cholelithiasis.[14-20]

The association between cholelithiasis and gallbladder cancer has been known since 1861 and is supported by autopsy studies, screening surveys, and hospital-based case-control studies.[2] Cholelithiasis is more frequent in gallbladder cancer than in extrahepatic bile ducts cancer. In a case-control study performed in Australia, Canada, Holland, and Poland, a history of gallbladder symptoms requiring medical attention was identified as one of the major risk factors for gallbladder cancer.[21] The theoretical basis for this phenomenon is that the inflammation, chronic trauma and infection in approximately 1/3 of gallstone patients promotes epithelial dysplasia and adenocarcinoma formation.[2] For this reason, it has been suggested that larger stones have a greater impact on the risk of developing gallbladder cancer, possibly reflecting greater duration and intensity of epithelial irritation. It was reported in a study that a mean stone diameter of 20.3mm among 19 subjects with gallbladder cancer as compared to 883 subjects undergoing surgery for gallstones with mean diameter of 11.9 mm.[22]

Cholesterol gallstones represent approximately 80 to 90% of all gallstone cases in the Western world and are considered to be a promoting factor. There is little available information as to whether pigment or cholesterol stones have a different activity as promoters of gallbladder cancer development.[2,l]

Duration of stones in gallbladder had important relation in the formation of carcinoma. Due to lack of awareness and urban population to which our hospital cater, most of the patients were presented for surgery after prolong period of time, may be this is the reason for high frequency of carcinoma gall bladder in our series. The same trend was also reported by other authors from Pakistan where history of gallstones were 10 years of more in 75% of patients.[14]

Preoperative diagnosis of carcinoma of gallbladder is an exception rather than the rule.[23] The advent of laparoscopic cholecystectomy has indeed lowered the threshold for symptomatic patients with gallbladder disease. It seems possible that if gallbladder disease in general is

Table I. Age and Sex prevalence and risk factors of gastroesophageal reflux disease

Age Group	Male (No. %)	Female (No. %)	Total (No. %)
21 - 30 years	1 (6.25)	--	1 (6.25)
31 - 40 years	--	1 (6.25)	1 (6.25)
41 - 50 years	1 (6.25)	2 (12.5)	1 (6.25)
51 - 60 years	1 (6.25)	7 (43.75)	3 (18.75)
> 61 years	1 (6.25)	2 (12.5)	8 (50.0)
Total	4 (25)	12 (75)	3 (18.75)

Variable	(No. %)
Ultrasound Findings	**10(62.5)**
Thickened gallbladder wall	**5(31.25)**
Only gallstones	**4(25.0)**
Gallbladder polyp	**2(12.50)**
Hepatomegaly	**2(12.50)**
Dilated common bile duct	
Site involved	**8(50)**
Fundus	**5(31.25)**
Body	**1(6.25)**
Neck	**2(12.50)**
Whole gallbladder	
Grade of tumour	**8(50)**
Well differentiated	**5(31.25)**
Moderately differentiated	**2(15.50)**
poorly differentiated	**1(6.25)**
Un-differentiated	
Tumor Stage	**11(68.75)**
pT1	**3(18.75)**
pT2	**2(12.50)**
pT3	

Table I. Ultrasound and histopathological features of gallbladder

operated on earlier, incidental gallbladder cancers may also be detected at an earlier stage. Complete surgical resection is the only potentially curative treatment. The role of chemotherapy and radiation therapy in the management of gallbladder cancer remains undefined.[24] The dismal results are due to the aggressive biology of this tumor and to the advanced stage at which gallbladder cancer often presents.[25] Most of our patients who were diagnosed carcinoma gallbladder had early stage of the disease (mostly pT1). Gallbladder carcinoma at pT or pT1 stage at Cholecystectomy needs no other treatment. It is recommended that the gallbladder be removed by vinyl bag and port sites be excised or washed with normal saline to prevent port site recurrence in patients with laparoscopic cholecystectomy for pT2 or pT3 carcinoma.[13]

CONCLUSION

Availability of adequate and prompt cholecystectomy for symptomatic gallstone should be effective for secondary prevention and detection and treatment of disease at an early treatable stage of the carcinoma gallbladder.

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