



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.3514635>Available online at: <http://www.iajps.com>

Research Article

**INCIDENCE OF INCIDENTAL CARCINOMA OF GALL
BLADDER IN PATIENTS UNDERGOING
CHOLECYSTECTOMY****Dr Urooj Fatima¹, Dr Unba Ghadia², Dr Nimra Fatima³**
^{1,2,3} Rawalpindi Medical University, Rawalpindi.**Article Received:** August 2019**Accepted:** September 2019**Published:** October 2019**Abstract:**

Objective: The aim of this case series study was to determine the incidence of gallbladder cancer after cholecystectomy for chronic calculus cholecystitis and whether cholecystectomy allows this fatal disease to be found at an earlier stage.

Study design: A case series.

Place and duration: This study was conducted in the Surgical Department of Holy Family Hospital Rawalpindi for two year duration from January 2017 to January 2019.

Methods: All patients with chronic cholecystitis due to cholelithiasis undergoing cholecystectomy were included and patients with known gallbladder carcinoma were excluded. All gallbladder samples were sent for histopathology. Gallbladder carcinoma cases with histopathologically confirmed carcinoma were evaluated with descriptive statistics.

Results: During the study, 260 cholecystomies were performed for cholelithiasis. Sixteen (6.15%) were reported to have gallbladder carcinoma. Four of them were male and 12 were female. Eight patients (50%) were in their fifth decade. Ultrasound revealed a thick-walled gallbladder in 10 patients (62.05%) and polyps in 4 patients (25%). A well differentiated carcinoma was reported in 8 (50%) gallbladder samples. The majority of 11 patients (68.75) had stage pT1 in histopathology.

Conclusion: The incidence of incidental findings of gallbladder carcinoma is high. The presence of an adequate and rapid cholecystectomy for patients with symptomatic gallstones should be effective for detection, secondary prevention and treatment at an early treatable stage of the disease.

Keywords: Gallbladder carcinoma, incidental finding, cholecystectomy.

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Please cite this article in press Urooj Fatima et al., *Incidence of Incidental Carcinoma of Gall Bladder in Patients Undergoing Cholecystectomy.*, Indo Am. J. P. Sci, 2019; 06(10).

INTRODUCTION:

In 1777; Gallbladder cancer was first discovered. After additional 230 years, late detection and the lack of operative treatment for many patients remain this disease typical features [1-3]. Although relatively rare, it is the most common malignant neoplasm of the biliary system that predominantly occurs in older women [4]. There is a wide inconsistency among sources of gallbladder cancer epidemiology. Though, it is very uncommon disease, it is extremely destructive malignancy, with an estimated annual incidence of 1 to 2 people per 100,000, related with almost 2,500 mortality per year. Risk factors include gallbladder calcification, cholelithiasis, adenomatous polyps of the gallbladder, oestrogens, obesity, chemical carcinogens and choledochal cysts [5-6]. The symptoms associated with gallbladder cancer may be relatively non-specific, and the initial symptoms mimic much more common gallbladder diseases [7]. In addition, gallbladder stones are present in the majority of patients with gallbladder cancer. Due to gallstone disease, more than 750,000 colic cystectomies are performed annually and incidentally 1% or less than gallbladder cancer is noted in all cholecystectomies [8]. We examine the incidence of

gallbladder cancer in chronic gallbladder cholecystitis after cholecystectomy and whether cholecystectomy allows us to discover this fatal disease at an early stage.

MATERIALS AND METHODS:

In this case series which held in the Surgical Department of Holy Family Hospital Rawalpindi for two year duration from January 2017 to January 2019, all patients with chronic cholecystitis due to cholelithiasis undergoing cholecystectomy were included. Patients with known gallbladder carcinoma were excluded from the study. All gallbladder samples were sent for histopathology. Approved by histopathology carcinoma cases were evaluated with descriptive statistics used to analyze data related to age, sex, ultrasound findings, carcinoma site, tumor grade and stage.

RESULTS:

During the study period, 260 cholecystomies were performed for cholelithiasis. Sixteen (6.15%) were reported to have gallbladder carcinoma. Four of them were male, 12 were female, and male to female ratio was 1: 3. Eight patients (50%) were in their fifth decade (Table I).

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)	3 (18.75)
51 - 60 years	1 (6.25)	7 (43.75)	8 (50.0)
> 61 years	1 (6.25)	2 (12.5)	3 (18.75)
Total	4 (25)	12 (75)	16 (6.15)

Ultrasonography revealed thick-walled gallbladder in 10 patients (62.05%) and polyps in 4 patients (25%) (Table II).

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	

A well differentiated tumor was reported in 8 (50%) gallbladder samples (Table II). The stage of gallbladder-induced carcinoma is also shown in Table II, and 11 (68.75) of the patients had stage pT1.

DISCUSSION:

A central finding in all population-based collaborative case control studies was a strong association between a history suggesting previous gallbladder disease, gallbladder stones and subsequent gallbladder cancer risk [9-10]. Our results showed that gallbladder carcinoma was present in 6.15% of the gallbladder specimens of patients operated with symptomatic gallstones. This is relatively high compared to western literature. In Pakistan, 6-28% of carcinomas with cholelithiasis have been reported in different studies [11]. The relationship between gallbladder cancer and cholelithiasis has been noticed first in 1861 and has been reinforced by screening surveys, case studies, autopsy studies and controls in hospitals [12]. In gallbladder cancer; Cholelithiasis is very common than in extrahepatic bile duct cancer. In a case control study in Canada, Australia, the Poland and Netherlands, a history of gallbladder symptoms needs medical interference was acknowledged as one of the main gallbladder cancer risk factor [13]. The

theoretical basis of this singularity is that chronic trauma, infection and inflammation support the formation of epithelial dysplasia and adenocarcinoma in approximately 1/3 of patients with gallbladder stones. Therefore, larger stones have been suggested to have a larger influence on the gallbladder cancer risk, possibly for a longer period and reflecting the intensity of epithelial irritation. In one study, 19 patients with gallbladder cancer were reported to have a mean stone diameter of 20.3 mm and an average of 11.9 mm compared with 883 patients who underwent gallbladder surgery [14]. Cholesterol gallbladder stones account for about eighty to ninety percent of all gallbladder cases in the western world and is reflected as a supporting factor. There is no much data available as to whether the cholesterol or pigment stones have a different activity as advocates of carcinoma of gallbladder. The duration of gallbladder stones had a significant relationship with carcinoma formation. Due to the lack of information and the urban population served by our hospital, most patients underwent surgery after a long period of time, which may be the reason for the high incidence of gallbladder carcinoma in our hospital. The same trend was reported by other Pakistani authors, who reported a history of gallbladder stones in 75% of patients for 10

years or more. Preoperative diagnosis of gallbladder carcinoma is rather exceptional than the rule. The emergence of laparoscopic cholecystectomy reduced the threshold in symptomatic patients with gallbladder disease. If gallbladder disease is operated earlier, incidental gallbladder carcinoma can also be identified at primary stage. Complete surgical resection is the only potential therapeutic treatment. The role of radiotherapy and chemotherapy in the treatment of gallbladder cancer remains to be defined. The terrible outcomes are due to the destructive nature of this tumour and the progressive stage in which gallbladder cancer often occurs [15]. Most of our patients diagnosed with gallbladder carcinoma had an early stage of the disease (mostly pT1). Gallbladder carcinoma in the pT or pT1 stage does not need any further treatment in cholecystectomy. In patients with laparoscopic cholecystectomy for PT2 or pT3 carcinoma, it is recommended that the gallbladder be removed with a vinyl bag and the port areas removed or irrigated with normal saline.

CONCLUSION:

The presence of an adequate and rapid cholecystectomy for symptomatic gallstones should be effective for the secondary prevention and detection and treatment of the disease at an early treatable stage of the gallbladder due to carcinoma.

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