

Research Article

Outcome of routine histo-pathological examination of gallbladder specimen followed by Elective Laparoscopic Cholecystectomy, Ghorahi, Dang, Nepal

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ABSTRACT

Background & Objectives: Gall bladder disease is the one of the commonest surgical diseases which is encountered in the surgical department. Gall bladder stone is the commonest pathological condition which affects the gallbladder. Gallbladder carcinoma is a rare but highly lethal

malignancy. Gallbladder carcinoma is highly challenging for the health care professionals. This study evaluated the outcome of the routine histopathological examination of laparoscopic cholecystectomy specimens.

Materials and Methods: This study was a retrospective observational study, conducted on 209 patients, who had undergone cholecystectomy for the symptomatic cholecystitis at Gorkha Public Hospital Pvt Ltd, General Surgery Department from September 2023 to September 2024. After obtaining ethical clearance from the Institutional Review Committee, the data was retrieved from the hospital records.

Results: Of the 209 patients, 80.9% (n=169) were females. Amongst the various histopathological findings, chronic cholecystitis was the most prevalent (71.8%, n=150/209), which was followed by chronic cholecystitis with cholesterolosis (23.0%, n=48/209). All the pathological specimens represented benign conditions except for one which was a 50-years-old female diagnosed with adenocarcinoma.

Conclusion: Chronic cholecystitis was the commonest gallbladder pathology with females

having higher preponderance for development. Studies are required to elicit further information in this important surgical entity.

Keywords: Cholelithiasis; Cholecystectomy; Malignancy

INTRODUCTION

Gallstone disease is one of the common surgical problems worldwide and most commonly seen in women [1]. Laparoscopic cholecystectomy is a common surgical procedure performed to treat symptomatic gallbladder diseases. The prevalence of gallbladder stone in Nepalese population is 4.87% [2-4].

Laparoscopic cholecystectomy has become the standard operative procedure for cholelithiasis [5]. Gall bladder cancer is a rare but the most common (80-95%) biliary tract neoplasm. It has a worldwide incidence rate of 0.3-1.5% [6]. The incidence in Nepal showed 1.28% among routine histopathological examination of cholecystectomy specimens [7]. Gall Bladder Carcinoma (GBC) is generally associated with a poor prognosis, mainly due to late diagnosis, with a reported 5-year survival rate of 5% [8]. Approximately 90% of Gall bladder cancer are seen in cholelithiasis. Stone accompanying chronic inflammation is attributable for Gall bladder cancer. Benign conditions are highly predominant than malignant condition [6-9]. The purpose of this study is to know whether routine Gallbladder histopathological examination is informative and establish the rate of incidental carcinoma of gall bladder in patients undergoing routine cholecystectomy, demographic profile and prognosis of these patients.

MATERIALS AND METHODS

This study was conducted at the Gurkha Public Hospital Pvt Ltd, Department of General Surgery. The study proposal was approved by IRC-RAHS (Ref No: 395). The retrospective reviewed data conducted on patients who had performed symptomatic cholecystectomy from September 2023 to September 2024. All the gall bladder specimens were fixed in 10% neutral buffered formalin and send to the pathology lab for histopathological examination.

A total 209 patients records were thoroughly reviewed and patients who undergo elective or emergency cholecystectomy and age more than 14 years were included. Patients suspected or diagnosed with hepatobiliary malignancies prior to surgery and age below 14 was excluded. The demographic data such as (age, sex) operative finding and histopathological report were recorded.

Data entry was done in Epi-data 3.1 version. After collection of data, data was checked out systematically then edited, coded and entered. A data analysis was done in IBM SPSS 16.0 version. Quantitative data were summarized by using mean and standard deviation but for categorical data was summarized by frequency and percentage.

RESULTS

Table 1 represents about the age and gender distribution of participants which revealed that female participants are higher than male participants 169:40. The highest predominance age group among female are 25-35 years (83.3%) where male participants are at 35-45 years (25.9%) only.

Table 1: Age and gender distribution of participants

Age group (Years)	Gender		Total
	Female	Male	
15-25	16 (76.2%)	5 (23.8%)	21 (100%)
25-35	53 (88.3%)	7 (11.7%)	60 (100%)
35-45	40 (74.1%)	14 (25.9%)	54 (100%)
45-55	35 (79.5%)	9 (20.5%)	44 (100%)
55-65	19 (86.4%)	3 (13.6%)	22 (100%)
>=65	6 (75.0%)	2 (25.0%)	8 (100%)
Total	169	40	209

Table 2: Distribution of gallbladder histo-pathological diagnosis

Histo-pathological diagnosis	Frequency	Percentage
Chronic cholecystitis	150	71.8
Chronic cholecystitis with cholesterolosis	48	23.0
Acute on chronic cholecystitis	1	0.5
Chronic follicular cholecystitis	2	1.0
Chronic cholecystitis with cholesterol polyp	4	1.7
Chronic cholecystitis with intestinal metaplasia	1	0.5
Xanto-granulomatous cholecystitis	1	0.5
Chronic Xanto-granulomatous cholecystitis	1	0.5
Adenocarcinoma	1	0.5
Total	209	100.0

Table 3: Distribution of histo-pathological diagnosis with gender

Histo-pathological diagnosis	Gender		Total
	Female	Male	
Chronic cholecystitis	116 (68.6%)	34 (85.0%)	150
Chronic cholecystitis with cholesterolosis	43 (25.4%)	5 (12.5%)	48
Acute on chronic cholecystitis	1 (0.6%)	0 (0%)	1
Chronic follicular cholecystitis	2 (1.2%)	0 (0%)	2
Chronic cholecystitis with cholesterol polyp	4 (2.4%)	0 (0%)	4
Chronic cholecystitis with intestinal metaplasia	1 (0.6%)	0 (0%)	1
Xanto-granulomatous cholecystitis	1 (0.6%)	0 (0%)	1
Chronic Xanto-granulomatous cholecystitis	0 (0%)	1 (2.5%)	1
Adenocarcinoma	1 (0.6%)	0 (0%)	1
Total	169 (100)	40 (100)	209

Among 209 cases most of the cases shows benign pathology in which chronic cholecystitis 71.8% were highly predominance and only one cases show the malignant pathology condition, adenocarcinoma (0.5%) as shown in table 2.

Table 3 & 4 highlights about distribution of histopathology diagnosis with gender, both

female and male gender shows benign pathology were predominance in which chronic cholecystitis among female was 68.6% and 85.5% in male. Only female 0.6% show the malignant pathological condition Adenocarcinoma. About distribution of histo-pathological diagnosis with age most of the age cases shows chronic cholecystitis and Xanto-granulomatous cholecystitis is the one of the rarest forms of benign pathology that

Table 4: Distribution of histo-pathological diagnosis with age

Histo-pathological diagnosis	Age (years)						Total
	15-25	25-35	35-45	45-55	55-65	>=65	
Chronic cholecystitis	18 (85.7%)	38 (63.3%)	38 (70.4%)	34 (77.3%)	14 (63.6%)	8 (100%)	150
Chronic cholecystitis with cholesterolosis	3 (14.3%)	16 (26.7%)	15 (27.8%)	8 (18.2%)	6 (27.3%)	0 (0%)	48
Acute on chronic cholecystitis	0 (0%)	0 (0%)	0 (0%)	1 (2.3%)	0 (0%)	0 (0%)	1
Chronic follicular cholecystitis	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (9.1%)	0 (0%)	2
Chronic cholecystitis with cholesterol polyp	0 (0%)	4 (6.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	4
Chronic cholecystitis with intestinal metaplasia	0 (0%)	1 (1.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1
Xanto-granulomatous cholecystitis	0 (0%)	1 (1.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1
Chronic Xanto-granulomatous cholecystitis	0 (0%)	0 (0%)	1 (1.9%)	0 (0%)	0 (0%)	0 (0%)	1
Adenocarcinoma	0 (0%)	0 (0%)	0 (0%)	1 (2.3%)	0 (0%)	0 (0%)	1
Total	21	60	54	44	22	8	209

can mimics as a gallbladder carcinoma was seen in the age group of 25-35 years in one case only similarly malignant cases, adenocarcinoma was seen in age of 50 years female.

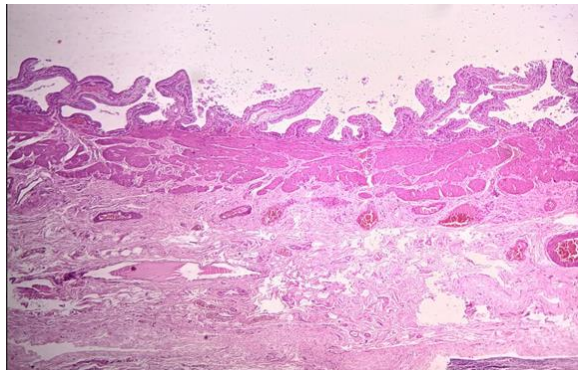


Figure 1: Chronic Cholecystitis of gallbladder

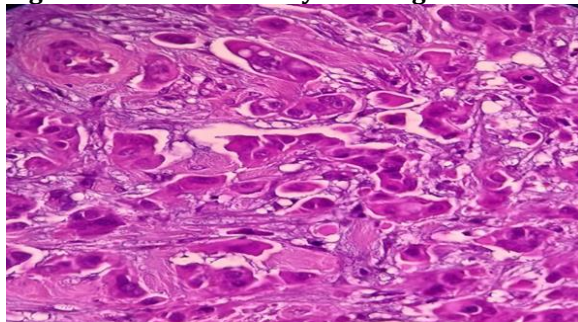


Figure 2: Adenocarcinoma of gallbladder

DISCUSSION

Cholecystectomy is commonly performed surgery. It is the most commonly seen in women. In our study, female was highly affected than male 169:40. This study was similar by Kotasthane et al [1]. The incident of carcinoma of gallbladder in female is comparable with Kotasthane et al and Khan et al [1,10]. The incidence of Gallbladder carcinoma was found higher in female than male in a study conducted by Shrestha R et al [3].

In our study, chronic cholecystitis was the more and similar to results shown by different studies [1,12,13,14,15]. The Xanto-granulomatous cholecystitis in our study was found only in a single female, but in India it was higher in predominance [1]. Xanto-granulomatous cholecystitis is one of the rarest forms of benign pathology that mimics as a Gallbladder carcinoma.

In the present study, out of 209 cases 208 cases are benign cases but only one cases was malignant which was at the age of 50 years of female. Similarly finding of Ashesh Kumar Jha et al reported that out of 921 cases 694 cases were female and 227 were male. Benign gallbladder cases were reported was high. But malignant cases at lower age group was high in Choi and its colleagues [15,16].

CONCLUSION

Chronic cholecystitis was the most common gallbladder diseases. Female had higher preponderance for development of all gallbladder diseases, including malignancy like adenocarcinoma.

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