



## HISTOPATHOLOGICAL STUDY OF GALL BLADDER LESIONS IN CHOLECYSTECTOMY SPECIMEN AT, JHALAWAR MEDICAL COLLEGE - 5 YEAR RETRO AND PROSPECTIVE STUDY

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### ABSTRACT

**Introduction:-** Gall bladder disease shows variable clinical presentation and gall stone thought to be the most common etiological factor. Gall bladder disease involves benign inflammatory lesion, premalignant lesion and carcinoma. **Aims and objective:-** To study histopathology of various gall bladder lesions inflammatory, benign and malignant category, distribution of various lesion, in cholecystectomy specimens received in Department of Pathology, Jhalawar Medical College, Jhalawar, Rajasthan. **Material and method:-** This is a retro and prospective 5 years observational study on 125 cholecystectomy specimen received in department of pathology, Jhalawar medical college over a period of from 1 August 2017 to 31 July 2022. Tissue fixation, gross, tissue processing and staining will be done. **Result:-** A total of 125 specimens in which 115 cases of chronic cholecystitis, 4 cases of adenocarcinoma, 2 cases of Cholesterolosis, 1 cases of xanthogranulomatous cholecystitis, 1 case of granulomatous cholecystitis, 1 case of acute suppurative cholecystitis, 1 case of chronic cholecystitis with cholelithiasis with mild dysplasia. The frequency of gallbladder diseases was found to be more in females in comparison with males (77.60% cases of females and 22.40% cases of males). **Conclusion:-** Our study emphasizes that a routine cholecystectomy for common condition like gall stone diseases can result in a diverse wide spectrum of histopathological lesions ranging from benign diagnosis to unexpected gall bladder malignancy. Prompt detailed histopathological analysis will help to confirm the benign nature of the disease or to detect any precursor of malignancy.

**KEYWORDS :** Cholecystectomy, gall stone, cholecystitis, malignancy

### INTRODUCTION

Cholecystectomy specimen (gallbladder) is one of the most frequently encountered surgical specimen in a histopathology department. Gall bladder disease shows variable clinical presentation and gall stone thought to be the most common etiological factor. Gall bladder disease involves benign inflammatory lesion, premalignant lesion and carcinoma. Cholelithiasis is a multifactorial disease, more prevalent in fatty, fertile, females of forty years until menopause but can occur in children and males also. Incidental gallbladder carcinoma is found in about 0.5-1.1% of cholecystectomy for gallstone disease. The most important risk factor for gallbladder cancer (besides gender and ethnicity) is gallstone. Gallbladder cancer is a late presentation disease; hence the prognosis is poor and associated with high mortality rate.

### AIMS AND OBJECTIVE

1. To study histopathology of various gall bladder lesions in cholecystectomy specimens received in Department of Pathology, Jhalawar Medical College, Jhalawar, Rajasthan. 2. To categorize the gall bladder lesions in inflammatory, benign and malignant category. 3. To determine the distribution of various lesions. 4. To determine the age and sex distribution of the lesions.

### MATERIALS

This is a retro and prospective 5 years observational study on 125 cholecystectomy specimen received in department of pathology, Jhalawar medical college over a period of from 1 August 2017 to 31 July 2022.

### METHOD

Tissue fixation, gross examination:-10% Neutral buffered formaline for adequate fixation at room temperature. Tissue processing: - in this process tissue will be completely dehydrated extracellular as well as intracellularly. There are

few steps which involve this process includes dehydration, clearing, embedding, sectioning and staining. Hematoxylin and Eosin stains will be used for slide staining and afterwards observed under microscope.

### RESULT

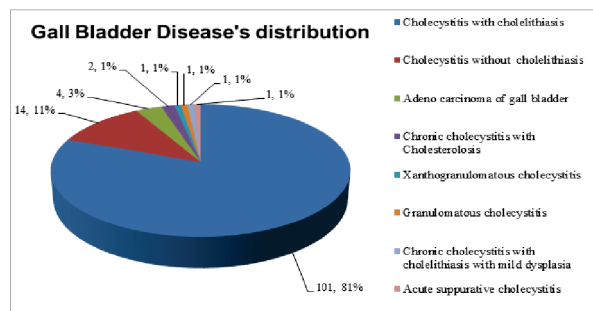
Cases were studied on the basis of age, sex, and their morphological appearance, gross and microscopic findings. A total of 125 gall bladder specimens in which study showed 115 cases of chronic cholecystitis, followed by 4 cases of adenocarcinoma of gall bladder, 2 cases of Cholesterolosis, 1 cases of xantho granulomatous cholecystitis, 1 case of granulomatous cholecystitis, 1 case of acute suppurative cholecystitis, 1 case of chronic cholecystitis with cholelithiasis with mild dysplasia. Out of 115 cholecystitis disease cases of chronic cholecystitis with cholelithiasis were 101 (81.60%), whereas chronic cholecystitis without cholelithiasis was seen in 14 cases (11.20%). The frequency of gallbladder diseases was found to be more in females in comparison with males (77.60% cases of females and 22.40% cases of males). Maximum no of cases were seen in 2nd to 5th decade of life, but highest no. of cases observed in 31-40 years of age group.

Most common presenting symptoms of Gall bladder disease are mild to moderate pain in right hypochondrium which was seen in 112 cases, (89.60%) in our study. 100 cases (80%) also had pain radiating to the right shoulder, dyspepsia was seen in 48 cases (38.40%), vomiting in 48 cases (38.40%), fever in 29 cases (23.20%), and jaundice in 15 cases (12%). On gross examination, outer surface was found to be congested in 55 cases (44%), whereas it was normal in 70 cases (56%). Thickened wall was seen in 77 cases (61.60%), whereas it was normal in 48 cases (38.40%). Mucosa was atrophied in 74 cases (56%), hemorrhagic in 2 cases (1.60%), strawberry gall bladder seen in 1 cases (0.80%), normal mucosa seen 48 cases (38.40%). Gallstones were seen in 106 cases (84.80%), whereas no stone found in 18 cases (14.40%). In this study total

4 cases were diagnosed as carcinoma of gall bladder, in which all cases were adeno carcinoma. Out of 4, 3 cases were diagnosed as well differentiated adenocarcinoma, 1 cases was moderately differentiated adenocarcinoma.

**Table-1, Distribution Of Cases With Lesions Of Gallbladder**

Name of pathology	No. of Cases	Percentage
Cholecystitis with cholelithiasis	101	81.60%
Cholecystitis without cholelithiasis	14	11.20%
Adeno carcinoma of gall bladder	4	3.20%
Chronic cholecystitis with Cholesterolosis	2	1.60%
Xanthogranulomatous cholecystitis	1	0.80%
Granulomatous cholecystitis	1	0.80%
Chronic cholecystitis with cholelithiasis with mild dysplasia	1	0.80%
Acute suppurative cholecystitis	1	0.80%



The incidence of gallbladder diseases was found to be more in females, 97 out of 125cases (77.60%) were female patients whereas only 28 were male patients (22.40%). Hence the study showed female predominance and male to female ratio was 1:3.4. Maximum no of cases were seen in 2nd to 5th decade of life, but highest no. of cases were observed in 31-40years of age group.

**Table-2, Male Female Distribution**

Total cases	Male	Female
125	28(22.40%)	97(77.60%)

**Table -3, Age Group Wise Distribution Of Gall Bladder Lesions**

Age group	Total	Percentage
11-20 years	08	6.40%
21-30 years	22	17.6 %
31-40 years	30	24 %
41-50 years	24	19.20%
51-60 years	22	17.6%
61-70 years	17	9.60%
> 70 years	02	1.60%
	125 cases	100%

**Table-4, Gross Features Of Gall Bladder**

Gross features	Cases	Percentage
Outer surface		
Congested	55	44%
Normal	70	56%
Mucosa		
Normal	74	56%
Strawberry	01	0.80%
Hemorrhagic	02	1.60%
Atrophic	48	38.40%
Wall		
Thickened	77	61.60%
Normal	48	38.40%
Gall stone		
Present	107	85.60%
Absent	18	14.40%

**Table-5 Distribution Of Gall Bladder Carcinoma**

Type of carcinoma	No. of cases (%)	Male	Female
Adeno-carcinoma	4(3.20%)	1	3
Well differentiated	3	1	2
Moderately differentiated	1	-	1
Poorly differentiated	0	-	-

**CONCLUSION-**

Our study emphasizes that a routine cholecystectomy for common condition like gall stone diseases can result in a diverse wide spectrum of histopathological lesions ranging from benign diagnosis to unexpected gall bladder malignancy. Prompt detailed histopathological analysis will help to confirm the benign nature of the disease or to detect any precursor of malignancy.

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