

To Study the Histomorphological Diversity of Various Non-Neoplastic and Neoplastic Lesions of Gall BladderNeelam Kumar Soni¹, Meha Ghodawat², Pratima Verma³, Dhiraj Kumar Soni⁴, Manoj Kela⁵¹Senior Resident, Department of General Surgery, Shrimant Rajmata Vijayaraje Scindia Medical College and Hospital, Shivpuri (M.P.)²Ex Post Graduate Student, Department of General Surgery, Sri Aurobindo Medical College and PG institute, Indore (M.P.)³Senior Resident, Department of Pathology, Swaroop Rani Nehru Hospital Associated Moti Lal Nehru Medical College, Prayagraj (U.P.)⁴ Senior Resident, Department of General Medicine, Shyam Shah Medical College Rewa And Sanjay Gandhi Memorial Hospital Rewa (M.P.)⁵HOD & Professor, Department of General Surgery, Sri Aurobindo Medical College and PG institute, Indore (M.P.)

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Conflict of interest: Nil

Abstract**Background & Methods:** The aim of the study is to study the histomorphological diversity of various non-neoplastic and neoplastic lesions of gall bladder. Due importance was paid to record a brief clinical history with age, Inpatient number, presenting signs & symptoms, drug history and relevant radiological and other investigations. Thorough gross examination was carried out and salient features were noted down. The gross specimens received were fixed in 10 percent formalin for 24 hours and multiple sections from each specimen were taken to include the representative area for histological examination.**Results:** A total of about 106 cholecystectomies were found in two year study duration. In this study the age of patients ranged from 18 years to 80 years. Cases were studied for relevant clinical information regarding age, sex, sign and symptoms if any. We observed 106 cases of cholecystectomy specimen of which 99(93.3 %) were inflammatory lesions, 05(4.7%) were malignant lesions and 01 case (0.9 %) were benign lesion.**Conclusion:** Majority of the patients (33.9%), 36 cases were in the age group of 41-50 years. It shows that gall bladder diseases most frequently occurs in middle aged population. Out of 106cases, 90(84.9%) cases were chronic cholecystitis, of which, 66(62.2%) cases are associated with gall stones and 24(22.6%) cases are without gall stones. The commonest histological observation found was chronic cholecystitis with cholelithiasis.**Keywords:** Histomorphological, Non-Neoplastic, Neoplastic & Gall Bladder.**Study Design:** Observational Study.This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.**Introduction**

A gallstone, is a calculus or stone framed inside the gallbladder as a solidification of bile parts. Lithiasis (stone development) in the gallbladder is called cholelithiasis. Gallstones are framed in the gallbladder however may pass distally into different parts of the biliary tract like the cystic duct, normal bile channel, pancreatic conduit or the ampulla of Vater [1].

Cholesterol gallstones create when bile contains an excess of cholesterol and insufficient bile salts. Other than a high grouping of cholesterol, two different variables are significant in causing gallstones [2]. The first is the manner by which frequently and how well the gallbladder contracts;

deficient and rare purging of the gallbladder might make the bile become over concentrated and add to gallstone arrangement. This can be made by high opposition the progression of bile out of the gallbladder because of the convoluted inward math of the cystic duct [3]. The subsequent variable is the presence of proteins in the liver and bile that either advance or repress cholesterol crystallization into gallstones [4].

Cholesterosis of the gallbladder happens for the most part in multiparous ladies. Horribly it shows direct weaknesses in the prominences of the edges, encompassed by a clogged mucosa ('strawberry gallbladder') Some of the time at least one of the

stores become bigger and jut into the lumen called as cholesterol polyps [5]. The bile inside the gallbladder with cholesterosis is generally dim and thick, with high convergence of cholesterol [6].

Material and Methods

The present study was conducted at Tertiary care Centre, Indore, M.P. is based on histomorphological evaluation in cases of neoplastic and non-neoplastic Gall bladder lesions received at the department of Pathology. Due importance was paid to record a brief clinical history with age, Inpatient number, presenting signs & symptoms, drug history and relevant radiological and other investigations. Thorough gross

examination was carried out and salient features were noted down. The gross specimens received were fixed in 10 percent formalin for 24 hours and multiple sections from each specimen were taken to include the representative area for histological examination. Sections were processed with a tissue processor and embedded in paraffin block which were cut in 05 micron thickness with the help of microtome. Sections were stained with conventional Haematoxylin and Eosin (H&E) stain. The lesions were then classified and studied as per the W.H.O. and other criteria of Gall bladder lesions.

Result

Table 1: Age Distribution

Age of patient(years)	No. of patients	%
00-10	03	2.8
11-20	03	2.8
21-30	19	17
31-40	20	18.08
41-50	36	33.09
51-60	14	13.2
61-70	10	9.4
71-80	01	0.9

In our study out of 106 cases, 3 cases (2.8%) were found in the age group of 0-10 yrs, 3 cases (2.8%) were found in the age group of 11-20 yrs, 19 cases (17.0%) were found in the age group of 21-30 yrs, 20 cases (18.08%) were found in the age group of 31 -40 yrs, 36 cases (33.09%) were found in the age group of 41 -50 yrs, 14 cases (13.2%) were found in the age group of 51-60 yrs, 10 cases

(9.4%) were found in the age group of 61-70 yrs, 1 case (0.9%) was found in the age group 71-80 yrs. The minimum age of the patient with gall bladder lesion in our study was 6 yrs and maximum age was 73 yrs. In our study maximum cases i.e. 36 cases (33.9%) were found in the age group of 41-50 yrs.

Table 2: Distribution of malignant lesion in gall bladder

Adenocarcinoma	Frequency	Percentage
Adenocarcinoma, biliary type	04	3.7
Adenocarcinoma, gastric foveolar type	00	00
Adenocarcinoma, intestinal type	01	0.9
Clear cell adenocarcinoma	00	00
Mucinous adenocarcinoma	00	00
Signet ring cell carcinoma	00	00

In our study out of 106 cases, 5 cases (4.7%) were malignant. Out of these 4 cases (3.7%) were diagnosed as adenocarcinoma of biliary type and 01 case (0.9%) were diagnosed as adenocarcinoma of intestinal type.

Table 3: Disease and lesions of gall bladder among the cholecystectomies

Diseases	Number	Percentage
Normal	01	0.9
Acute cholecystitis	03	2.8
Chronic cholecystitis with cholelithiasis	66	62.2
Chronic cholecystitis without cholelithiasis	24	22.6
Acute gangrenous inflammation	00	00
Rokitansky Aschoff sinus	00	00
Microlith in Rokitansky Aschoff sinus	00	00
Adenomyomatous changes	00	00
Pyocoele	01	0.9

Mucocele	01	0.9
Focal xanthogranulomatous changes	00	00
Ulcer	00	00
Cholesterosis	03	2.8
Cholesterol polyp	01	0.9
Pyloric gland metaplasia	00	00
Adenoma	01	0.9
Xantogranulomatous cholecystitis	00	00
Adenocarcinoma	05	4.7

A total of about 106 cholecystectomies were found in two year study duration. In this study the age of patients ranged from 18 years to 80 years. Cases were studied for relevant clinical information regarding age, sex, sign and symptoms if any. We observed 106 cases of cholecystectomy specimen of which 99(93.3 %) were inflammatory lesions, 05(4.7%) were malignant lesions and 01 case (0.9 %) were benign lesion.

Discussion

Out of 106 cases 66 cases (62.2%) were determined as ongoing cholecystitis to have cholelithiasis. In our concentrate out of 106 cases, 27(25.4%) were males and 79 (74.5%) were females. The purposes behind cholecystectomies was intense cholecystitis in 03 cases, persistent cholecystitis in 24 cases, gall stones with constant cholecystitis in 66 cases, gall bladder polyps in 01 case, pyocele in 01 case, mucocele in 01 case, thought nerve bladder carcinoma in 05 cases [7].

Ongoing cholecystitis is the most well-known infection of the gallbladder, larger part of cholecystectomies are performed for persistent cholecystitis. It is related with cholelithiasis in over 90% of cases. Subsequently likewise with gallstones there is female predominance [8]. Female sex hormones and stationary propensities for ladies in India open them to factors that perhaps advance development of gallstones.

In our review larger part of 66 cases (62.2 %) were of constant cholecystitis with cholelithiasis and larger part of them were in females. By far most of the acute cholecystitis cases are because of gallstones formation [9]. It normally creates when the stones are affected in the neck of the cystic conduit. Acute calculous cholecystitis is the essential confusion of gallstones and is additionally the most well-known justification for crisis cholecystectomy. In our review 90 cases (84.4%) were of ongoing cholecystitis and 66 of them were related with gall stones [10].

Shrestha et.al [11] 14 concentrated on 668 examples, among them 643(96.3%) have nonneoplastic sores, 1(0.15%) has gallbladder adenoma of pyloric sort, 22 (3.29%) have essential gallbladder harm, 2(0.3%) shows metastatic cholangiocarcinoma of gallbladder.

Conclusion

Majority of the patients (33.9%), 36 cases were in the age group of 41-50 years. It shows that gall bladder diseases most frequently occurs in middle aged population. Out of 106cases, 90(84.9%) cases were chronic cholecystitis, of which , 66(62.2%) cases are associated with gall stones and 24(22.6%) cases are without gall stones. The commonest histological observation found was chronic cholecystitis with cholelithiasis.

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