

ORIGINAL ARTICLE**Clinico- pathological evaluation of specimens of Gall Bladder**Paritosh Mohan¹, Sherry Kapur², Amit Varshney³¹Associate Professor, Department of General Surgery, Major S D Singh Medical College, Farukhabad, Uttar Pradesh²Assistant Professor, Department of Pathology, Major S D Singh Medical College, Farukhabad, Uttar Pradesh³Assistant Professor, Department of General Medicine, Sakshi Medical College, Guna, Madhya Pradesh**ABSTRACT:**

Background: Cholelithiasis produces diverse histopathological changes in mucosa ranging from acute inflammation to dysplasia and carcinoma. The present study was conducted to assess clinical and histopathology of specimens of gall bladder. **Materials & Methods:** 68 gall bladder specimens were fixed in 10% formalin. Gross examination findings along with characteristic of stones, relevant clinical history were noted. **Results:** Out of 68 specimens, 48 were from males and 20 were from females. Common clinical features were pain abdomen seen in 45, fever in 20, jaundice in 29 and vomiting in 34. Histopathological findings were acute acalculus cholecystitis in 13, chronic calculus cholecystitis in 24, xanthogranulomatous cholecystitis in 8, follicular cholecystitis in 5, mucocele in 6, cholesterosis in 4, gangrenous cholecystitis in 5 and carcinoma gall bladder in 3 patients. The difference was significant ($P < 0.05$). **Conclusion:** Most of the lesions found to be chronic calculus cholecystitis.

Key words: Chronic calculus cholecystitis, Gallbladder, Histopathology.

Corresponding author: Dr. Sherry Kapur, Assistant Professor, Department of Pathology, Major S D Singh Medical College, Farukhabad, Uttar Pradesh, India

This article may be cited as: Mohan P, Kapur S, Varshney A. Clinico- pathological evaluation of specimens of Gall Bladder. J Adv Med Dent Sci Res 2016;4(2):190-192.

INTRODUCTION

Gall bladder is one of the most commonly resected organs; the number of cholecystectomies has increased more than 50% in the last decade. This organ is not essential for biliary function because humans do not suffer from malabsorption of fat after cholecystectomy. Over 95% of biliary tract diseases are attributable to cholelithiasis.¹ Cholelithiasis produces diverse histopathological changes in mucosa ranging from acute inflammation to dysplasia and carcinoma. The rate of gall bladder diseases is more common among females than males. Gall bladder diseases are more common in the Northern India.²

Risk factors for gall bladder disease include diet, obesity, multiparity and chronic infections including Salmonella typhi and paratyphi and Helicobacter pylori. Gall stones (cholelithiasis) has increasingly become a major cause of abdominal pain and discomfort in the developing world. The prevalence of gall stones is has increased in the recent years. The types of gall stones

include - Mixed stones, combined stones, Pigment stones and, Cholesterol stones.³

However, several recent studies have questioned the necessity for routine HPE of all gallbladder specimens. The main debate on selective versus routine histological assessment of gallbladder specimens is based on findings of incidental GBC.⁴ The present study was conducted to assess clinical and histopathology of specimens of gall bladder.

MATERIALS & METHODS

The present study was conducted among 68 gall bladder specimens obtained from general surgery department of both genders.

Data such as name, age, gender of patients was recorded. Cholecystectomy specimens were fixed in 10% formalin. Gross examination findings along with characteristic of stones, relevant clinical history were noted. Results thus obtained were statistically analyzed.

RESULTS**Table I Distribution of specimens**

	Total- 68	
Gender	Males	Females
Number	48	20

Table I shows that out of 68 specimens, 48 were from males and 20 were from females.

Table II Clinical features in patients

Clinical features	Number	P value
Pain abdomen	45	0.05
Fever	20	
Jaundice	29	
Vomiting	34	

Table II, graph I shows that common clinical features were pain abdomen seen in 45, fever in 20, jaundice in 29 and vomiting in 34. The difference was significant (P< 0.05).

Graph I Clinical features in patients

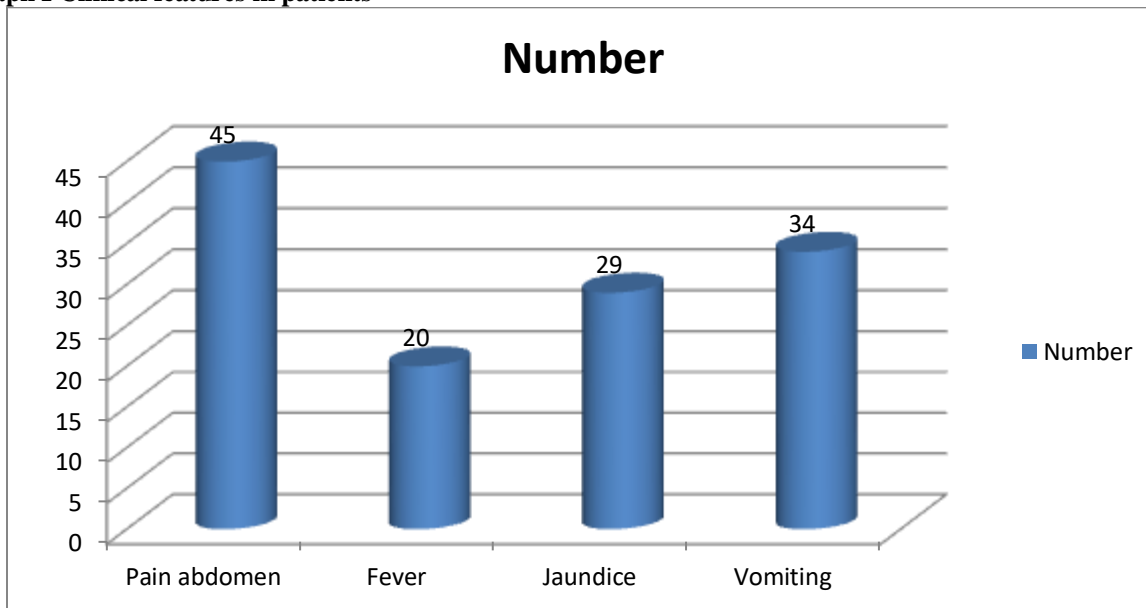


Table III Histopathological findings

Histopathological findings	Number	P value
Acute acalculus cholecystitis	13	0.02
Chronic calculus cholecystitis	24	
Xanthogranulomatous cholecystitis	8	
Follicular cholecystitis	5	
Mucocele	6	
Cholesterolosis	4	
Gangrenous cholecystitis	5	
Carcinoma gallbladder	3	

Table III shows that histopathological findings were acute acalculus cholecystitis in 13, chronic calculus cholecystitis in 24, xanthogranulomatous cholecystitis in 8, follicular cholecystitis in 5, mucocele in 6, cholesterolosis in 4, gangrenous cholecystitis in 5 and carcinoma gallbladder in 3 patients. The difference was significant (P< 0.05).

DISCUSSION

Certain populations are far more prone than others to develop gallstones. The following applies to cholesterol gallstones. The prevalence rate of cholesterol gallstones

approach 75% in native Americans of the first migration from Asia. Gallstones exhibit prevalence rates of around 25% in industrialized societies but are uncommon in underdeveloped or developing societies. The prevalence of gallstones increases throughout life and in women is about twice as in men.⁵

Gallbladder cancer (GBC) is the most common malignancy of the biliary tract, accounting for 80%–95% of biliary tract cancers. Gall bladder cancer is more common among north Indian cities and two times higher in women.⁶ The incidence of gall bladder carcinoma has great geographic and ethnic variation. In

India, gall bladder cancer is rare (1%). Majority of the incidence of gall bladder cancer are from northern (The Gangetic belt) and central parts of the country. Screening of pre-malignant lesions of gall bladder is mandatory for early detection of disease and presence of suspicious lesion.⁷

Pradhan et al⁸ variety of lesions can be found if cholecystectomy specimens were examined meticulously. Patients usually present with signs and symptoms of long duration and with vague complaints like pain in abdomen, nausea, dyspepsia. Most of the cases seen were of chronic calculus cholecystitis. These cases were predominant in females and associated mostly with pigmented stones. All cases of carcinoma gallbladder were missed on clinical examination and ultrasonography. The present study was conducted to assess clinical and histopathology of specimens of gall bladder.

In present study, out of 68 specimens, 48 were from males and 20 were from females. Aslam et al¹⁰ found that of the total of 800 cholecystectomy specimens it included 95 males and 705 females. Most of the cases were of age group 31-40 years. Majority of the malignant cases occurred in the 8th decade. Most common diagnosis was chronic cholecystitis and more common in females. Multigravida females were more prone to develop gall bladder diseases. The commonest presenting complaints were right hypochondrial pain in 460 (92%), followed by nausea in 15 (3%), epigastric pain in 13 (2.6%), vomiting in 10 (2%), jaundice in 2 (0.4%).

We found that common clinical features were pain abdomen seen in 45, fever in 20, jaundice in 29 and vomiting in 34. Goyal et al¹⁰ found that among 50 patients in the present study, chronic cholecystitis was the diagnosis in 40 patients (80 percent of the patients), while pre-invasive and invasive diagnosis was seen in 8 patients (16 percent of the patients) and 2 patients (4 percent of the patients) respectively. Mean size of stone in the cholecystitis patients was 0.68 cm, while mean size of stone in pre-invasive and invasive patients was found to be 1.19 cm and 3.98 cm. Significant results were obtained while assessing the correlation of size of gallstones with gallbladder mucosal response.

Various epithelial pathological changes in the gall bladder mucosa are ruled out with the help of clinico-radiological examination and extensive histological evaluation to prevent cancer related morbidity and mortality. Mazlum M et al¹¹ studied specimen of gall bladder in which rate of cholelithiasis was 89.9%. Vrbica SM et al¹² studied gall bladder specimens and found 80% were calculous lesions.

CONCLUSION

Authors found that most of the lesions are chronic calculus cholecystitis.

REFERENCES

1. Khuroo MS, Mahajan R, Zargar SA, et al. Prevalence of biliary tract disease in India: a sonographic study in adult population in Kashmir. *Gut*. 1989 Feb;30(2):201-55.
2. Singh V, Trikha B, Nain C, et al. Epidemiology of gallstone disease in Chandigarh: A community-based study. *J Gastroenterol Hepatol*. 2001 May;16(5):560-3.6.
3. Marschall HU, Einarsson C. Gallstone disease. *J Intern Med*. 2007 Jun;261(6):529-42.
4. Johnston DE, Kaplan MM. Pathogenesis and treatment of gallstones. *N Engl J Med*. 1993 Feb 11;328(6):412-21.
5. Kapoor VK, McMichael AJ. Gallbladder cancer: an 'Indian' disease. *Natl Med J India*. 2003 Jul-Aug;16(4):209-13.9.
6. Pal V, Lakhatia H, Gahlaur Y, Ghargav. A. Clinico-pathological study of cholecystitis. *Indian Journal of Surgery*. 1980 Sep;426-43.
7. Idris SA, Shalayel MHF, Elsididg KE, Hamza AA, Hafiz MM. Prevalence of different types of gallstone in relation to age in Sudan. *Sch. J. App. Med. Sci*. 2013; 1 (6): 664-67.
8. Pradhan SB, Joshi MR, Vaidya A. Prevalence of different type of gallstone in the patients with cholelithiasis at Kathmandu Medical College, Nepal. *Kathmandu University Medical Journal*. 2009; 7(3):268-71.
9. Aslam HM, Saleem S, Edhi MM, Shaikh HA, Khan JD, Hafiz M et al.; Assessment of gallstone predictor: comparative analysis of ultrasonographic and biochemical parameters. *International Archives of Medicine*, 2013; 6(1):17.
10. Goyal S, Singla S, Duhan A. Correlation between gallstones characteristics and gallbladder mucosal changes: A retrospective study of 313 patients. *Clin Cancer Investig J*. 2014;3(2):157-61.
11. Mazlum M, Dilek FH, Yener AN, Tokyol C, Aktepe F, Dilek ON. Profile of Gallbladder Diseases Diagnosed at Afyon Kocatepe University: A Retrospective Study. *Türk Patoloji Derg*. 2011;27(1):23-30.
12. Vrbica SM, Vrbica A. Correlation between Cholelithiasis and Gallbladder Carcinoma in Surgical and Autopsy Specimens. *Coll Antropol*. 2009;33(2):533-7.