



STUDY OF GALL BLADDER DISEASES IN CHOLECYSTECTOMY AND AUTOPSY SPECIMEN

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ABSTRACT

Gall bladder diseases are fairly common in our society. The present study was carried out in a large government hospital to study the spectrum of gall bladder diseases as they were received in the histopathology and autopsy sections of department of Pathology. Clinical correlation was also done. Gall bladder diseases have female preponderance (66.25%), most patients were in the age group of 41-50 years, pain was the most common presenting feature(92.5%), 83.7% had cholecystitis, 66.25% had cholelithiasis and 8.75% of cases were of malignancy. One case each of adenoma and ectopic pancreas and two cases each of polyps and cholesterosis were also seen.

KEYWORDS : Cholecystectomy, Gall bladder, Autopsy

Introduction

Gall bladder diseases are quite common in our country. The incidence of gall bladder diseases are increasing in our country due to changing dietetic pattern and greater awareness of the problem with advanced diagnostics at our hand (Jagadeeshan). Cholecystitis, cholelithiasis and tumors are the most common diseases involving gall bladder. The present study was undertaken to observe different pathologies in surgical pathology and autopsy specimen and to correlate them clinically.

Aims and objectives

To study the occurrence of gall bladder diseases in cholecystectomy and autopsy specimen and correlation of these lesions with clinical findings.

Materials and methods

The study was carried out at a large hospital in a metropolitan city of India. The present study consisted of 80 cases of which 70 were from surgical pathology and 10 were from autopsy sections.

The age and sex of the patients was noted and important clinical features were taken in to account like pain, vomiting, fever, jaundice, loss of appetite, hepatomegaly, lump, weight loss, ascites etc.

The gall bladder received in surgical pathology and autopsy sections were processed as per Rosai(). They were opened longitudinally as soon as possible and fixed in 10% formaldehyde to prevent mucosa from undergoing autolytic changes. Search for lymph nodes along the bladder neck was made. The length and greatest diameter of the gall bladder was noted. Serosa was studied for thickening, adhesions and fibrin deposition. One section each from fundus, body and neck were taken along the length of the gall bladder. Additional sections were taken from areas which appeared grossly abnormal.

The sections were routinely processed and paraffin blocks were prepared. These blocks were cut at 4-6µ thickness and slides were prepared. They were stained by Hematoxylin and Eosin and subjected to microscopic examination.

Observations and Results:

Table 1 : Age and Sex distribution of cases:

Age(Yrs)	No. Of cases		
	Males	Females	Total (%)
<20	00	01	01(01.25)
20-30	04	05	9(11.25)
31-40	07	14	21(26.25)
41-50	06	21	27(33.75)
51-60	07	07	14(17.25)
61-70	01	05	06(07.50)
71-80	02	00	02(02.50)
Total	27	53	80(100)

Age group of 41-50yrs showed the peak incidence of cases and only one case was below 20yrs.

Table2: Clinical features of cases:

Serial no	Clinical features	No. Of cases*	%
1.	Pain	74	92.5
2.	Vomiting	20	25
3.	Fever	12	15
4.	Jaundice	08	10
5.	Loss of appetite	04	05
6.	Hepatomegaly	03	3.75
7.	Lump	02	2.5
8.	Weight Loss	02	2.5
9.	Ascites	02	2.5

*The total number of cases exceeds the actual number of cases due to multiple complaints of patients.

Pain was the most prevalent complaints (92.5%).

The first four clinical features were found in all types of gall bladder diseases whereas the last five were most frequently with malignant lesions.

Cholecystitis included acute and chronic cholecystitis.

Cholecystitis was seen in 67 out of 80 cases(83.75%). Malignancies accounted for 7 cases(8.75%), of which two were secondary tumors. Two cases each of cholesterosis and polyps and one each of adenomas and ectopic pancreas were seen. 53 cases of cholelithiasis were seen.

Table 3: Spectrum of different gall bladder diseases:

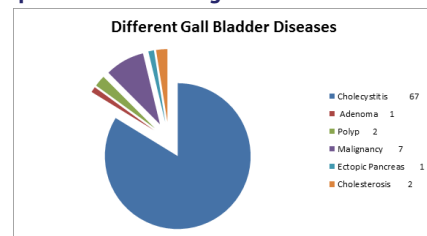


Table 4: Histological types and differentiation of primary gallbladder carcinomas.

Serial No.	Age(Yrs)	Sex	Histological Type	Differentiation
1.	65	M	Mucin secreting adenocarcinoma	Moderately differentiated
2.	35	M	Adenocarcinoma	Moderately differentiated

3.	66	F	Adenocarcinoma	Well differentiated
4.	45	F	Papillary adenocarcinoma	Well differentiated
5.	22	M	Adenocarcinoma	Well differentiated

Two secondary tumors were found. One was of metastatic adenocarcinoma and other of extranodal Non-Hodgkin's Lymphoma involving multiple organs.

Discussion:

The present study was conducted with a view to study different gallbladder pathologies among the surgical pathology and autopsy specimen and to correlate it clinically.

This study included 80 cases, 70 of these were cholecystectomy specimen. The number of cases from autopsy section were restricted (10 only) due to frequent autolysis seen in mucosa of gallbladder. Gall bladder is known to undergo autolysis very fast (Rosai,1989).

Age and sex distribution of gall bladder diseases:

Gall bladder diseases are rare in children, identified in adolescence and show marked increase in frequency in age group of 35-55(Hermann,1989). The present study also shows similar result and only one case of cholecystitis associated with hydatid cyst of liver was found in a girl aged 12 years. Gall bladder diseases peaked in age group 41 to 50 years constituting 33.75% of cases. And 60% of cases were found in the age between 31 and 50 years.

The table 1 shows that there was female preponderance in all age groups except 71-80 years. Out of 80 cases, 27 were males and 53 were females. Male:Female ratio being 1:1.95

Cholecystitis and cholelithiasis, which constitute majority of cases, show female preponderance with a ratio of 3:1 in their favour up to the age of 50 years and 1.5:1 thereafter (Nahrwold, 1991). The present study had a male to female ratio of 1:1.25, 1:2 and 1:3.5 in age groups 21-30, 31-40 and 41-50 years respectively.

Clinical features of gallbladder diseases: Clinical features of malignant diseases are also non-specific denying their early detection and resection (Piehler and Crichlow,1978). Pain, vomiting, fever, and jaundice were seen in all types of cases where as loss of appetite, hepatomegaly, lump, weight loss and ascites were seen more frequently with malignant lesions.

Types of gallbladder diseases: A spectrum of diseases ranging from heterotopias to malignant lesions were seen in the present study.

Cholecystitis was seen in 67 cases of which 41 were chronic cholecystitis. Among the 26 cases of acute cholecystitis, 4 had gangrenous cholecystitis and 2 of these presented with perforation. Three of the four cases were males which is similar to observations made by Sariego(1992).

The incidence of gallbladder malignancies vary in world literature. Strauch(1.4%), Black(2.3%), Piehler and Crichlow(1.91%), Gupta(7%), Hai(8.95%). The present study showed seven cases of malignancy(8.75%) which is higher than the western studies but comparable to the Indian studies. Five of these were primary tumors, all being adenocarcinomas of which one was mucin secreting while the other showed features of papillary carcinoma. Finding two secondary malignancies in this study was very interesting. One case was widely metastatic adenocarcinoma of stomach in a 55 year male, reaching upto the muscle layer from the serosal aspect whereas the other was extranodal Non-Hodgkin's lymphoma involving jejunum, spleen, liver, gall bladder and peritoneal cavity in a 42 year old male. Malignant melanomas are known to metastasize to gallbladder in 15% of cases(Das Gupta and Brasfield). Malignant lymphomas have been found to metastasize to gallbladder (Rosenberg) and primary lymphoma of gallbladder is acceptable diagnosis only if all evidences of disseminated disease are ruled out.

Polyps of gall bladder are quite rare. The present study showed one case each of cholesterol and inflammatory polyps being 0.4 and 0.5 cm in maximum diameter respectively, which is common. There is no evidence to suggest that cholesterol or inflammatory polyps have any greater potential for malignancy than the mucosa in their vicinity(Majesky,1986).

Cholesterosis was found in two cases in the present study. In one of the cases serum cholesterol level was available(283mg%). However, no relationship between the serum cholesterol level and cholesterosis has been found (Tilvis, 1982 and Jacyna, 1987).

The incidence of adenoma is approximately 1% in cholecystectomy specimen(Albridge, 1990). Christensen and Ishak(1970) reported 51 cases of adenomas in their review. In the present study, one case of adenoma in a 50 year old female was found which constituted 1.25% of cases. It was 1 cm in diameter which puts it under benign category according to Kozuka(1982) who concluded that adenomas over 12mm in size changed to malignancy. Microscopically, the present case was a tubular adenoma which is the most common variety of adenomas (Albores-Saavedra, 1992).

Ectopic tissues in gall bladder, like gastric, intestinal and adrenal tissues, although rare, have been reported in world literature. Ectopic pancreatic tissue was found in one case in the serosal layers in a 45 year female in the present study. Curtis and Sheahan(1969) reported a mixed gastric and thyroid tissue in the gall bladder. Jarvi and Meurman(1964) have reported heterotopic pancreatic tissue in the gall bladder.

Conclusions

Gall bladder diseases are most common in 4th and 5th decade with a female sex preponderance. Pain is the most common and most consistent feature of gall bladder diseases. Although cholecystitis is the most common condition, malignancies are not rare constituting 8.75% of cases in the present study. Although rare, ectopic tissues, polyps, adenomas can also be seen sometimes.

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