A 5 Years Study on Histomorphology and Metaplastic Changes in the Gallbladder in a Tertiary Care Hospital

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ABSTRACT

BACKGROUND

Gallbladder is among the most commonly surgically resected organ and the number of cholecystectomies has increased by more than 50% in the past decade. Cholecystitis is the most common disease of the gallbladder. It is the frequent cause of morbidity in many patients. It also affects a significant portion of the world's population. Over 95% of biliary tract disease is attributable to cholelithiasis. Chronic cholecystitis is the major indication for cholecystectomy.

METHODS

This is a 5 years retrospective study carried out in the cholecystotomy specimens received in the Dept. of Pathology, RIMS during the period of 2010 to 2015.

RESULTS

A total of 4964 cholecystectomy specimen received in the Dept. of Pathology were analysed. Histomorphological diagnosis along with changes in the gallbladder epithelium were noted. 2432 cases (49%) show pyloric metaplasia and 447 cases (9%) show intestinal metaplasia. The mean age for pyloric metaplasia is 45 years and 56 years for intestinal metaplasia. There were 3 (0.06%) incidental diagnosis of gallbladder adenocarcinoma.

CONCLUSIONS

Cholecystitis can be regarded as a disease of the modern times. Cholecystectomy, today is second only to appendicectomy. Pyloric metaplasia is the predominant epithelial change encountered in this study followed by intestinal metaplasia.

KEYWORDS

Cholecystitis, Cholecystectomy, Pyloric Metaplasia
**BACKGROUND**

Gallbladder is among the most commonly surgically resected organ, and the number of cholecystectomies has increased more than 50% in the past decade. Approximately 6,00,000 cholecystectomies are performed annually in United States, mostly for gallstone related disease. The incidence of cholecystitis due to gallstone is variable but of magnitude problem. In India approximately 5 lakhs cholecystectomy are performed, and most are associated with gallstone.

Cholecystitis is the most common disease affecting the gallbladder. It is the frequent cause of morbidity for many patient and it also affect a significant portion of the world’s population. Cholecystitis consists of acute and chronic type. Both may or may not be associated with gallstone. Acute calculous cholecystitis accounts for about 95% of the cases while acute acalculous cholecystitis accounts for about 5% of all cases and a higher proportion often occurred in children. Chronic cholecystitis is rarely seen in the absence of gallstone. It has been suggested that chronic cholecystitis develops as a result of recurrent attack of mild acute cholecystitis. The inflammatory and reparative changes may be in part explained by repetitive mucosal trauma produced by gallstone. Over 95% of biliary tract disease is attributable to gallstone. It is well known that chronic cholecystitis is the major indication for cholecystectomy.

**METHODS**

This is a retrospective study conducted on all cholecystectomy specimen received in the Dept. of Pathology, RIMS, a tertiary care hospital during the period of 2010 to 2015. Three representative hematoxylin eosin stained slides of each specimen were studied. Histomorphological diagnosis along with changes in the gallbladder mucosal epithelium was noted. The aim of this study is to find out the changes in the lining epithelium of chronic cholecystitis specimen with or without lithiasis. The histological appearance of gallbladder mucosa was studied to find out the changes according to age and sex of the patients.

**RESULTS**

A total of 4964 cholecystectomy specimen were received is the histopathology section of the department. The youngest age encountered is this study was 10 years while the oldest was 80 years of age. The mean age of the patient recorded in this study was 41 years. It was observed that maximum incidence of chronic cholecystitis belonged to the age group of 41-50 years (23%) followed by 31-40 years (16.5%) and 21-30 yrs. (16.5%) age group. The lowest incidence was observed in the first decade of life.

In respect to gender incidence, there is strong preponderance for female gender (87.5%) than males (12.5%).

**DISCUSSION**

Cholecystitis is the most common disease encountered in the gallbladder. Acute cholecystitis is associated with gallstones in 95% of case while acute acalculous cholecystitis accounts for about 5% of the cases. Chronic cholecystitis is rarely seen in the absence of gallstones. The morphologic changes in chronic cholecystitis are extremely variable and sometimes minimal. The diagnosis of chronic cholecystitis is based mainly in the demonstration of predominantly mononuclear cell infiltrate, fibrosis and/or metaplastic change. The degree of inflammatory reaction was variable.

In the present study, antral or pyloric metaplasia was seen in the absence of galltones. It is well known that chronic cholecystitis is the major indication for cholecystectomy.
CONCLUSIONS

It can be said that cholecystitis and cholelithiasis are the ailments of the modern times with high rate of occurrence all over the world. In majority, cholecystitis is the main culprit and the chronically inflamed gallbladder displays a variety of epithelial changes. These changes may also be observed in chronic cholecystitis without lithiasis. The epithelial change encountered in this study is pyloric metaplasia followed by intestinal metaplasia. Incidental findings of carcinoma gallbladder warrants thorough histopathological examination particularly in elderly patients.

REFERENCES