INTRODUCTION

Adenomyomatosis of the gall bladder is an uncommon benign and hyperplastic condition of the gall bladder characterized by the proliferation of its mucosal lining. The incidence ranges from 2% to 8.7%. It is found to occur more frequently after 3rd or 4th decade of life. However, few cases have also been reported in pediatric population. A female predominance has also been noted. Adenomyomatosis is an incidental finding in gall bladder specimens resected for chronic cholecystitis or cholelithiasis. Patients with adenomyomatosis are usually asymptomatic. Jutras in 1960 used the term “hyperplastic cholecystoses” to described what is now termed as adenomyomatosis. There are three different variants described in adenomyomatosis. These include segmental, fundal, and diffuse type.

CASE REPORT

A 65-year-old male patient came with complaints of vague abdominal discomfort associated with lower abdominal pain since 1-month. There was no history of fever, nausea, vomiting, diarrhea, yellowish discoloration of the eyes and urine. On physical examination, the abdomen was soft, non-tender, and no mass was palpable. Investigations revealed hemoglobin of 14 g/dl, the total count of 6.6 × 10^3/µL. Ultrasound examination of the abdomen and pelvis showed grade one fatty infiltration of liver and chronic cholecystitis. The patient was hence taken up for laparoscopic cholecystectomy, and the specimen was sent for histopathological examination.

Pathological Findings

On macroscopic examination, the cholecystectomy specimen weighed 9 g and measured 6 cm × 3.5 cm. The cut section showed focal bile stained, denuded mucosa. The fundus of the gall bladder showed a multicystic mass in the wall measuring 1 cm × 1 cm (Figure 1). A single lymph...
node was also identified at the neck of the gallbladder. No stones were identified.

On microscopic examination, focally ulcerated, hyperplastic gall bladder mucosa was observed. Rokitansky-Aschoff sinuses or outpouchings of the mucosa were seen penetrating into and through the muscularis propria (Figures 2 and 3). The lining consisted of columnar epithelial cells with no atypical features. Focal pylori metaplasia was also found. Few glands were irregularly shaped and cystically dilated surrounded by proliferating smooth muscle cells (Figures 3, 4a and b). None of the glands showed features of malignancy. The mucular layer and serosa showed few congested vessels and lymphoplasmacytic infiltrate. Section from the lymph node showed reactive changes. Hence, a diagnosis of adenomyomatosis-fundal variant with chronic cholecystitis was rendered.

**DISCUSSION**

Of the three variants of adenomyomatosis, segmental form is the most common, followed by the fundal variant and the diffuse type. The fundal variant is often difficult to appreciate on radiology as the fundus of the gallbladder is insufficiently visualized, because of the intestinal gas. Even in the present case the lesion was not detected on ultrasonography. It has also been suggested that computerized tomography may help to distinguish adenomyomatosis of fundal type from localized chronic cholecystitis.

Both clinically and pathologically the fundal type differs from the other two types of adenomyomatosis. This type has a lower incidence of gall stones. No stones were detected in our case on gross examination. The grade of inflammation is also found to be of lower grade in these cases. Carcinoma of the gall bladder is also found to be less commonly associated with the fundal variant. No atypical features were observed in our case.

On histopathological examination, adenomyomatosis of the gall bladder has hyperplastic mucosa, lobules of glandular parenchyma, cystically and irregularly dilated glands lined by cuboidal to columnar epithelium with no atypical features. Smooth muscle cell bundles are seen in the surrounding stroma. On immunohistochemistry, similar to the biliary epithelium, the epithelial cells in adenomyomatosis show positivity for cytokeratin-7 and cytokeratin-20 and the smooth muscle cell cells for alpha-smooth muscle actin.

The differential diagnosis includes adenoma and adenocarcinoma of the gall bladder, various other polpoidal lesions such as hyperplastic and adenomatous polyps. Cholecystectomy is the treatment of choice for the fundal type of adenomyomatosis if patients do not respond to medical therapy. The latter is initiated only when adenomyomatosis is detected on radiology.
CONCLUSION

Fundal adenomyomatosis is a rare entity. It is often detected incidentally. Due to its rare potential of developing into benign or malignant tumor, it should be always born in mind during evaluation of cholecystectomy specimens.

ACKNOWLEDGMENT

We wish to thank all the technical staff of the Department of Pathology, Manipal University.

REFERENCES


Source of Support: Nil. Conflict of Interest: None declared.