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Case Report

Segmental type of gallbladder adenomyomatosis – Case report and literature review

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ABSTRACT

Introduction: Adenomyomatosis of the gallbladder is a benign mural disorder characterized by a thickened wall, proliferation and distention of Rokitansky–Aschoff sinuses surrounded by proliferated fibromuscular tissue.
Aim: Overview of radiological imaging methods used to evaluate the segmental type of adenomyomatosis of the gallbladder.
Case report: The patient was admitted to the Emergency Department with typical symptoms of hepatic colic. Ultrasonography did not allow the exclusion of gallbladder cancer and diagnosis required clarification in Multidetector CT and MR with MR cholangiopancreatography. The surgical pathological specimen revealed segmental form of adenomyomatosis with cholelithiasis and chronic inflammation.
Results and discussion: Adenomyomatosis is not considered a pre-cancerous condition, but elevated intraluminal pressure, gallstones and chronic inflammation are risk factors for gallbladder cancer. The most common imaging methods used to diagnose adenomyomatosis of gallbladder are US and MRI with MRCP.
Conclusions: The segmental type of gallbladder adenomyomatosis with a tendency of cholelithiasis, and higher risk of gallbladder malignancies, is a direct recommendation for cholecystectomy. Despite improvements of diagnostic imaging methods differentiation of segmental adenomyomatosis from early gallbladder cancer still remains challenging.

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1. Introduction

Adenomyomatosis of the gallbladder (GBA) is a relatively common disorder that has been reported in up to 8.7% of cholecystectomy specimens, diagnosed usually in fifth to sixth decade of life. Considered as a benign disorder it may be asymptomatic and detected incidentally. The GBA pathogenesis is unknown. Usually it is characterized by excessive proliferation of the gallbladder mucosa that creates invaginations through the thickened muscular layer, known as Rokitansky–Aschoff sinuses (RAS). Based on the location and the spreading area different types of GBA have been described: the segmental type, localized fundal type, localized annular type surrounding midportion of gallbladder and the last diffuse type involving entire gallbladder.[1,2] The most common segmental type is composed of annular stricture dividing the gallbladder into to the ''fundal compartment'' with a thickened wall and the ''neck compartment'' with normal size gallbladder wall. In diagnostic imaging, GBA manifests as diffused wall thickening or a local mass with intramural cysts, diverticula and increments required to be distinguished from gallbladder carcinoma. The differential diagnosis also includes: adenomatous, hyperplastic and cholesterol polyps, xanthogranulomatous cholecystitis, rarely mesenchymal neoplasms, gallbladder metastases or true diverticulum of gallbladder fundus.[3] Identification of the RAS is the key point in diagnosing GBA on the basis of different imaging examinations.

2. Aim

Discussing the role of radiological imaging in evaluation and differential diagnosis of segmental type of gallbladder adenomyomatosis.

3. Case report

A 60-year-old patient was admitted to the Hospital Emergency Department with pain localized in the upper right abdominal quadrant diffused to the right shoulder, caused by dietetic error. Symptoms developed over a period of four days. The laboratory tests which indicated a slight inflammation were showing CRP – 6.25 mg/L and WBC within normal limits – 7000 mm^3. A similar abdominal pain incident was noticed a year ago, but then the pain subsided after taking painkillers and spasmolytic drugs. Ultrasound (US) examination showed a thickened gallbladder wall, the fundal part of which resembled diverticulum with calcified deposits (Fig. 1). Also single small intramural foci of increased echogenicity were visible. US examination was determined to be inconclusive and did not give the accurate diagnose. Multidetector CT (MDCT) examination confirmed fundal wall thickening, poorly calcified deposits and no other organ damage (Fig. 2). Magnetic resonance (MR) imaging with MR cholangiopancreatography (MRCP) examination showed intramural cysts and areas of focal signal loss corresponding to calculi (Fig. 3). After three days from admission of the patient to the hospital

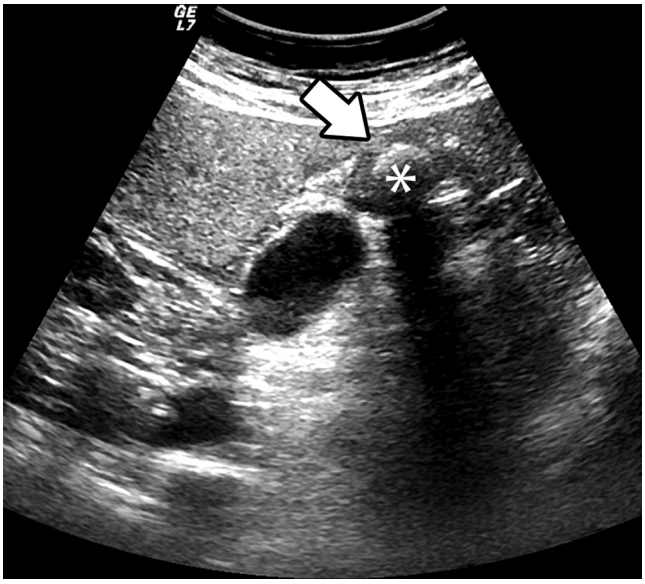

Fig. 1 – US examination in presentation B. Gallstone (asterisk) and thickened gallbladder wall (white arrow).

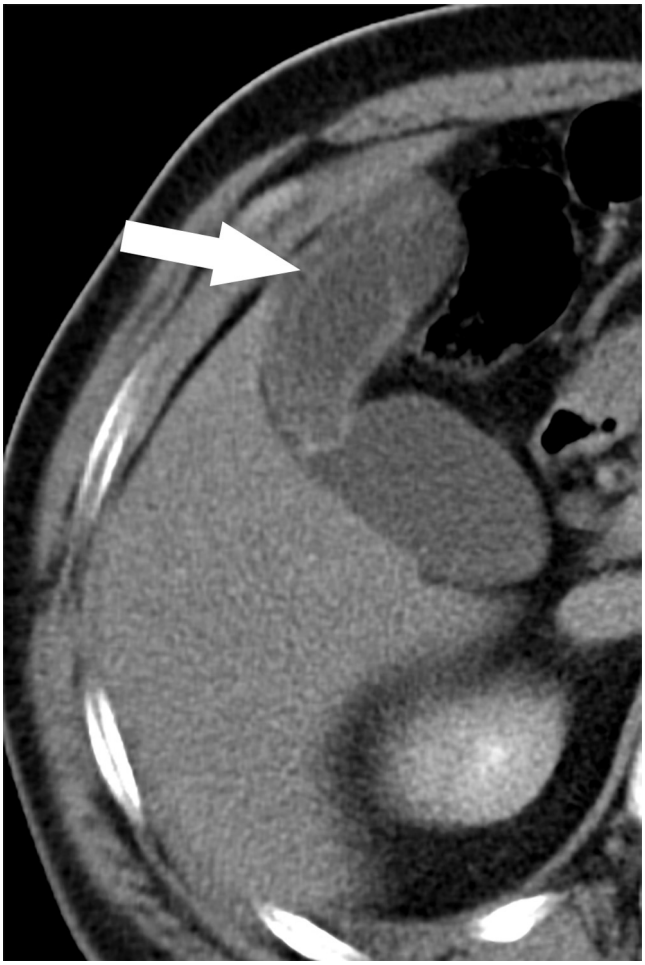

Fig. 2 – Axial CT scan after i.v. administration of iodine contrast and thickened gallbladder wall (white arrow).