

Ultrasound Diagnostic Descriptive Study of Vesicular Polyps at the Bamako Army Medical-Surgical Center: About A Case

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ABSTRACT

Gallbladder polyps are common and often asymptomatic. They are any growths that develop within the gallbladder lumen, originating from the gallbladder wall. Gallbladder polyps represent the majority of benign tumors and are present in 95% of the general population. Ultrasound examination is sufficient to diagnose typical forms of adenoma, cholesterol polyps (cholesterolosis), or adenomyomatosis. A size greater than 10 mm, the presence of risk factors for gallbladder cancer, and rapid growth are indications for therapeutic intervention. Hence the interest in reporting this clinical case of polyp that we diagnosed in the ultrasound department of the Military Medical-Surgical Center of Bamako.

Keywords

Gallbladder, Ultrasound, Military Medical-Surgical Center of Bamako, Tumor.

Introduction

Gallbladder polyps are the most common benign tumors of the gallbladder. Often asymptomatic, gallbladder polyps frequently pose a major diagnostic challenge. Indeed, there are several types of polypoid formations, each corresponding to a pathological entity with varying potential for malignant transformation. Imaging plays a crucial role in distinguishing precancerous lesions, which carry a risk of progression to gallbladder adenocarcinoma, from pseudopolyps, which do not require treatment.

True gallbladder polyps (TGP) are rare, with a prevalence in the general population of less than 10%. Recent European guidelines have attempted to standardize the management of TGPs based primarily on retrospective studies with small sample sizes, leading to conclusions with a low level of evidence. Abdominal ultrasound is the first-line examination for the diagnosis and monitoring of TGPs. In order to prevent the development of true gallbladder cancer or to treat malignant transformation in an early stage, any

TGP larger than 10 mm, or symptomatic, or larger than 6 mm associated with cancer risk factors (age over 50, sessile polyp, Indian ethnicity, or patient with primary sclerosing cholangitis) warrants cholecystectomy. Apart from these situations, ultrasound monitoring is recommended for at least 5 years with an indication for cholecystectomy in case of PVV growth of more than 2mm [1].

A case of cholesterol polyp is reported, revealed by the formation of an infundibulo-cystic enclave. The polyp had the appearance of a cholesterol stone, but was pedunculated and functioned as a stone. The extreme rarity of this complication is emphasized. Despite the frequency of associated lithiasis, cholesterolosis falls within a different category from lithiasis, that of cholecystosis, which presents typical pure parietal lesions without inflammation on histology [3].

For gallbladder disorders, endoscopic ultrasound is a second-line diagnostic method after abdominal ultrasound [2]. Polyps are the most common benign tumors of the gallbladder, with an estimated prevalence between 4 and 7%. Gallbladder adenomas are commonly detected by ultrasound and distinguished from cholesterol pseudopolyps and focal adenomyomatosis.

Cholecystectomy should be performed if the gallbladder polyp is larger than 10 mm, in patients with risk factors for malignant gallbladder tumors, or in patients with rapidly growing polyps [7].

The objective of our study is to specify the contribution of ultrasound examination in the diagnosis of vesicular polyps.

Methodology

This was a prospective and descriptive study of a clinical case of vesicular polyp diagnosed during an ultrasound examination, the patient of which had been referred by the gastroenterology department to the imaging department of the Bamako Military Medical-Surgical Center for diffuse abdominal pain.

The equipment used was a Mindray brand color doppler ultrasound machine equipped with two probes, one convex and the other linear, equipped with a desktop computer with Excel software for recording patient data, and Word for analyzing the ultrasound examination report. Camscanner on the Samsung A32 Android phone was used to scan the images on the ultrasound screen.

Observations

This was Mr. ST, 54 years old, farmer residing in Nioro du Sahel, who was seen in consultation in the gastroenterology department of CMCAB on August 9, 2023 for unspecified abdominal pain.

After a thorough interview and clinical examination, the hospital practitioner requested an abdominal-pelvic ultrasound examination.

Imaging

Various transverse and sagittal sections at the level of the epigastrium at the midclavicular line, using a 2.5 MG deep convex probe, revealed a liver measuring 99 mm along its long axis, anterior to the right kidney, with well-defined and regular contours, homogeneous parenchyma, and no focal lesions. The gallbladder presented as a heterogeneous echogenic image in the parietal region, with well-defined and regular contours, no posterior acoustic shadowing, and no color Doppler enhancement. It measured 8 mm in height, 7 mm in thickness, and 6 mm in width, with no associated intra- or extrahepatic biliary tract abnormalities.

At the end of the ultrasound examination, the analysis of the image of the gallbladder presented all the characteristics of a parietal growth, where the diagnosis of gallbladder polyp was suggested subject to confirmation by CT scan.



Figure 1: Normal ultrasound appearance of the gallbladder.

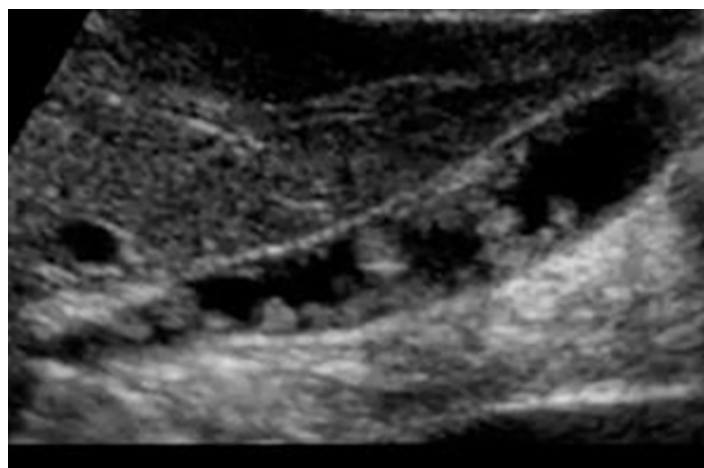


Figure 2: Polyp in the gallbladder [8].

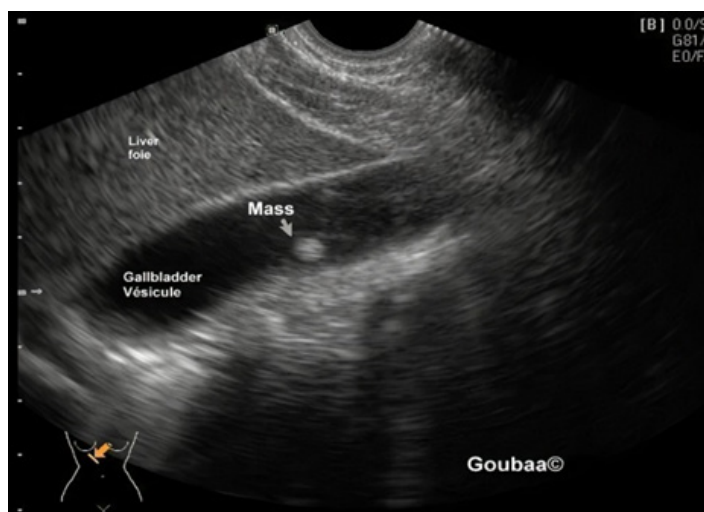


Figure 3: Ultrasonography Gallbladder polyp stone and Sludge ultrasound [9].

Abdominal and pelvic computed tomography (CT) scans, performed with and without iodinated contrast and multiplanar reconstructions, were conducted on the same day as the abdominal ultrasound. The ultrasound, which indicated a gallbladder polyp, confirmed the diagnosis, showing a liver of normal size, with regular contours and homogeneous density, without any detectable focal suspicious lesions. The gallbladder was acalculous, with a thin, non-distended wall, containing a small, tissue-like image attached to the right inner wall, slightly enhanced after injection of iodinated contrast, measuring 7 x 3 mm.

The intra- and extrahepatic bile ducts, on the other hand, were of normal size without perivesicular infiltration. Given this diagnostic confirmation of a gallbladder polyp measuring less than 10 mm but in a symptomatic context of diffuse abdominal pain, cholecystectomy was proposed.

Discussion

Gallbladder polyps are found in 5 to 7% of healthy individuals.

Two types of lesions are described in histopathology: cholesterol polyps and adenomyoma, which have no neoplastic potential, unlike pedunculated gallbladder adenoma and adenocarcinoma. Size is a predictive factor for malignancy. A pedunculated lesion larger than 10 mm has a significant probability of malignancy, and nearly 30% of lesions measuring 6 to 10 mm are also adenomatous. Doppler ultrasound and an increase in size during follow-up are predictive of malignancy [1].

In our case study, the lesion was not pedunculated and its size was 7 mm, less than 10 mm as described above [2], but this size fell within the 6 to 10 mm range, thus belonging to the 30% of adenomatous lesions. Color Doppler enhancement, being a sign of malignancy [3], was absent in our series.

The diagnosis of gallbladder adenomyomatosis, which is an acquired lesion of hyperplasia of the gallbladder wall. The prevalence of adenomyomatosis is significant, probably between 3 and 5%, with a female predominance. Invagination of the mucosa creates cavities, called "Rokitansky-Aschoff sinuses," which are found in 90% of cholecystectomy specimens; the term adenomyomatosis is used when these sinuses are deep, communicating, creating true "cystic" cavities, and are associated with significant thickening of the muscular layer. The overall wall thickness often exceeds 10 mm [5].

In our series of cases the lesion was not cystic, the wall was not thickened and the patient was male.

KIANMANESH.R reported in his study that "Vesicular polyps larger than 1 cm, especially solitary, sessile, and/or hypoechoic polyps, are associated with a high risk of malignancy (up to 50%)" [6]. This size at high risk of malignancy is also found in the literature [2]. In our case study, heIt was a polyp less than 1cm in size, non-sessile and hyperechoic, unlike the one described by KIANMANESH. R.

Conclusion

Gallbladder polyps are most often diagnosed by ultrasound and

must be distinguished from pseudopolyps. Their potential for malignant transformation depends on their size and other risk factors for gallbladder cancer.

In order to prevent the occurrence of follicular cancer, the priority is to detect these tumors at an early stage. In the presence of a polyp larger than one centimeter or risk factors for gallbladder cancer, cholecystectomy is the therapeutic choice. Abdominal ultrasound is the first-line imaging examination for diagnosing gallbladder polyps. It is non-invasive and readily available. Endoscopic ultrasound may be used as a second-line examination in certain cases.

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