

MANAGEMENT OF GALLBLADDER POLYPS: AN OPTIMAL STRATEGY PROPOSED

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SUMMARY – Polypoid lesions of the gallbladder can be divided into benign and malignant lesions. Benign polypoid lesions of the gallbladder are divided into tumors and pseudotumors. Pseudotumors make up the majority of polypoid lesions of the gallbladder. They can occur in the form of polyps, hyperplasia or other miscellaneous lesions. Adenomas are the most common benign neoplasms of the gallbladder. Ultrasound has been demonstrated to be significantly better in detecting polypoid lesions of the gallbladder as compared with computed tomography and cholecystography. Recommendations for an optimal strategy in the management of gallbladder polyps are presented. Generally, no treatment is required in a young patient with very small gallbladder polyps, who is completely free from symptoms. In patients with unequivocal recurrent biliary colic, elective cholecystotomy is warranted, especially in case of coexistence of stones and polyps. Cholecystectomy is also indicated in patients with gallbladder polyps greater than 10 mm, irrespective of symptomatology. In patients with gallbladder polypoid lesions smaller than 10 mm, cholecystectomy is only indicated if complicating factors are present, e.g., age ≥ 50 and coexistence of gallstones. If a gallbladder polyp is smaller than 10 mm and if complicating factors are absent, the “watch-and-wait” strategy seems to be recommendable.

Key words: *Polyps, diagnosis; Polyps, therapy; Gallbladder neoplasms, therapy*

Introduction

Polypoid lesions of the gallbladder can be divided into benign and malignant categories. Malignant polypoid lesions include carcinoma of the gallbladder, which is the fifth most common malignancy of the gastrointestinal tract and most common malignancy of the biliary tract¹. Benign polypoid lesions of the gallbladder are divided into true tumors and pseudotumors. Pseudotumors account for most of polypoid lesions of the gallbladder, and include polyps, hyperplasia, and other miscellaneous lesions².

Adenomas are the most common benign neoplasms of the gallbladder³.

Polyps of the Gallbladder

Cholesterol polyps are the most common pseudotumors of the gallbladder. The polyps can be single or multiple, usually less than 10 mm in size. They have no predilection for any particular gallbladder site, and usually are attached to the gallbladder wall by a delicate, narrow pedicle. Cholesterol polyps and cholesterosis may occasionally occur in association. No malignant potential has been identified for this type of pseudotumor⁴.

Inflammatory polyps are rare. They consist of a local inflammatory reaction of proliferating glandular epithelium and a vascular connective tissue stroma densely infiltrated with chronic inflammatory cells. Infrequently

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accompanied by gallstones, they are always associated with chronic cholecystitis⁵.

Hyperplastic polyps (papillary hyperplasia) are relatively common. Primary papillary hyperplasia, unlike the secondary form, is found in patients without gallstones, cholecystitis, or other inflammatory processes⁶.

Lymphoid polyps are similar to those seen in other regions of the gastrointestinal tract, and are usually found in association with chronic cholecystitis and lymphoid hyperplasia. Lymphoid polyps are small when compared with cholesterol polyps, measuring less than 5 mm. They can be found in all layers of the gallbladder wall⁷.

Fibrous polyps are associated with cholelithiasis as well as with acute and chronic inflammatory changes of the gallbladder⁸.

Granulation tissue polyps are granulomas or inflamed granulation that protrudes into the gallbladder lumen. These polypoid lesions usually are less than 10 mm in diameter, and are associated with acute or chronic inflammatory processes. They generally are longer than fibrous polyps or lymphoid polyps, and histologically are similar to fibroadenoma of the breast⁹.

Cholesterosis or 'strawberry' gallbladder is a disorder characterized by deposits of cholesterol esters and other lipids in the macrophages of lamina propria. The same lipids are deposited to a lesser degree in the epithelium and stroma of the gallbladder wall. The planar variety of cholesterosis is diffuse, creating a carpet of fine yellow papules over the mucosa surface. In more than one third of cases, these surface masses are less than 1 mm in diameter. The polypoid form of cholesterosis are single or multiple, discrete cholesterol polypoid lesions ('polyps')¹⁰.

Adenomas are the most common benign neoplasms of the gallbladder. They have no predilection site in the gallbladder, and may also be associated with gallstones or cholecystitis. The premalignant nature of adenomas remains controversial. Many authors believe that most gallbladder carcinomas arise *in situ* from flat, dysplastic epithelium, while others propose a polyp-to-cancer sequence in which some adenomas progress to adenocarcinomas^{4,11}.

Clinical Aspects

When symptoms develop in a patient with gallbladder polyps, the most common symptom is pain resembling

that of gallstones and chronic cholecystitis. The pain is thought to be due to hypercontraction of the gallbladder, however, it is sometimes caused by free floating debris causing intermittent obstruction. Polypoid excrescences may sometimes produce jaundice by polyps that become detached and migrate into the common bile duct. Other symptoms that can occur in polyps associated with cholesterosis are nausea and vomiting. However, it is very important to emphasize that most patients with gallbladder polyps are entirely free from abdominal pain or digestive complaints¹².

Ultrasonography (US) has been demonstrated to be significantly better in detecting polypoid lesions of the gallbladder as compared with computed tomography and cholecystography. A mass fixed to the gallbladder wall of normal thickness, without shadowing, is seen in case of gallbladder polyp. Unfortunately, the diagnosis of polypoid lesions can be difficult when the gallbladder is filled with bile sludge or gallstones¹³.

Since gallbladder cancers usually present as polypoid lesions, differentiation between benign polypoid lesion and malignant lesion can be very difficult, even with high-resolution imaging techniques. In two studies, the polyp size on US image was a useful discriminator^{14,15}. Both groups found that malignant lesions tended to be single and larger than 10 mm, and occurred in older patients.

Treatment

Generally, no treatment is required in young patients with very small gallbladder polyps who are completely free from any symptoms. A patient with dyspeptic symptoms but no painful episodes consistent with biliary colic should be managed conservatively. In patients with unequivocal recurrent biliary colic, elective cholecystectomy is warranted, particularly if stones are shown to coexist with the polyps. Cholecystectomy is also indicated in patients with large gallbladder polyps sized over 10 mm, irrespective of symptomatology. In patients with gallbladder polypoid lesions smaller than 10 mm, cholecystectomy is indicated only if complicating factors are present, e.g., age ≥ 50 and coexistence of gallstones. If the gallbladder polyp is smaller than 10 mm and complicating factors are absent, the "watch-and-wait" strategy seems to be recommendable. An optimal strategy for the management of patients with gallbladder polyps is presented in Fig. 1.

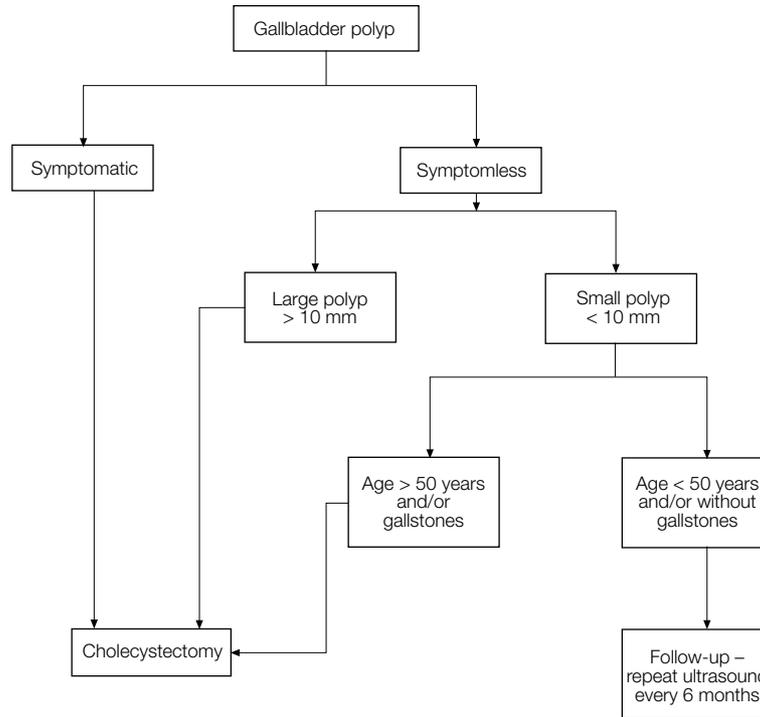


Fig.1. Optimal strategy for the management of gallbladder polyps

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Sažetak

LIJEČENJE POLIPA ŽUČNOGA MJEHURA: PRIJEDLOG OPTIMALNE STRATEGIJE

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Polipoidne lezije žučnoga mjehura mogu se podijeliti u benigne i maligne. Benigne polipoidne lezije dijele se na prave tumore i pseudotumore. Pseudotumori čine većinu polipoidnih lezija žučnoga mjehura, a mogu se očitovati kao polipi, hiperplazija ili druge različite lezije. Adenomi predstavljaju najčešće benigne neoplazme žučnoga mjehura. Pokazalo se da je ultrazvuk značajno bolji u otkrivanju polipoidnih lezija žučnoga mjehura u usporedbi s kompjutoriziranom tomografijom i kolecistografijom. U ovom su radu prikazane preporuke za optimalnu strategiju praćenja i obrade polipa žučnoga mjehura. Općenito, u mladog bolesnika s polipima žučnoga mjehura manjim od 10 mm i bez simptoma nije potrebna nikakva terapija. U bolesnika s jasnim kolikama elektivna kolecistektomija je opravdana, poglavito ako su uz polipe prisutni i žučni kamenci. Kolecistektomija je također indicirana u bolesnika s polipima većim od 10 mm, bez obzira na simptomatologiju. U bolesnika s polipima manjim od 10 mm kolecistektomija je indicirana samo ako se radi o bolesnicima starijim od 50 godina i/ili ako su istodobno prisutni i žučni kamenci. Kad su polipi žučnoga mjehura manji od 10 mm i ako se radi o bolesnicima mlađim od 50 godina u kojih nije moguće dokazati žučne kamence, preporučujemo strategiju 'pratiti i čekati'.

Ključne riječi: *Polipi – dijagnostika; Polipi, terapija; Neoplazme žučnoga mjehura, dijagnostika*