

GALLBLADDER POLYPS: HOW SHOULD THEY BE TREATED AND WHEN?

When a lesion projects from the gallbladder wall into the gallbladder interior it is called a gallbladder polyp. The number of gallbladder polyps diagnosed has increased greatly because of widespread use of abdominal ultrasonography. They are diagnosed in around 5% of the general population^(2,3,8).

Gallbladder polyps are defined as benign or malignant. Benign polyps are classified as: pseudotumors (cholesterol polyps, inflammatory polyps; cholesterosis and hyperplasia); epithelial tumors (adenomas) or mesenchymatous tumors (fibroma, lipoma, hemangioma). Malignant polyps are gallbladder carcinomas. Inflammatory polyps are uncommon. They are a local inflammatory epithelial proliferation reaction, involving infiltration of inflammatory cells, and are often associated with chronic cholecystitis^(1,8).

While adenomas are benign polyps, they can exhibit premalignant behavior. This type of lesion is habitually solitary and pedunculated and may be associated with gallbladder stones^(7,8).

The poor prognosis of gallbladder carcinoma patients means that it is important to differentiate between benign polyps and malignant or premalignant polyps, in order to choose the correct treatment^(6,7).

The significance of polypoid lesions of the gallbladder is not well understood by the majority of physicians and so the conduct to take with relation to these lesions is controversial. Habitually, polyps with a diameter of more than 1 cm are removed surgically because of the risk of them becoming malignant, while patients with smaller polyps need follow-up and frequent ultrasound scans for control. Distinguishing between non-neoplastic, neoplastic and potentially malignant lesions has become the major diagnostic challenge^(4,5).

Generally, polyps that are smaller than 1 cm and are asymptomatic are monitored for 6 to 12 months with control ultrasound scans, in order to detect any rapid growth. However, some studies have demonstrated that the polyp's diameter alone is not a safe exclusion criteria for neoplasm. One study demonstrated that 52.6% of gallbladder polyps smaller than 1 cm were pedunculated neoplastic lesions. Sugiyama et al. reported that approximately 30% of polyps between 11 and 15 mm were cholesterol. Cholecystectomy by video laparoscopy is considered the gold standard treatment for non-neoplastic polyps^(4,5,7).

The study by Matos et al. includes an international literature review of the subject and a retrospective study of patients operated at the Surgery Service II at the *Hospitais da Universidade de Coimbra* (H.U.C).

They performed a retrospective study and clinicopathological correlation of all patients operated on at the Surgery Service II with preoperative diagnosis of gallbladder polyps, between January 2003 and December 2007. Patients were excluded if they were diagnosed with polyps, but not referred for surgical treatment. They reviewed these patients' clinical processes and analyzed demographic data, clinical presentation, principal symptoms, associated pathologies and supplementary tests for

cases diagnosed. They assessed surgical procedures carried out, postoperative complications and 1-year postoperative follow-up.

The imaging exam chosen to study these patients was abdominal ultrasonography, which has sensitivity and specificity greater than 90% for diagnosing gallbladder polyps, even small-dimension lesions.

All operative specimens were submitted for anatomicopathological analysis and it was found that in 91 patients the polyps were benign while two patients had malignant polyps. Seventy-three of the 91 benign polyps were cholesterol polyps (78.5%), 14 (15%) were hyperplasia and two (2.2%) were adenomas. Both (2.2%) patients who had malignant polyps had adenocarcinoma of the gallbladder. The mean diameter of benign polyps was 6 mm, mean benign polyp patient age was 48.2 years and 40 patients (43%) had multiple lesions. The mean diameter of malignant polyps was 21.5 mm, both were solitary lesions and the mean age of the malignant polyp patients was 58.5 years.

When malignant and premalignant (adenomas) polyps were taken together, mean diameter was 18.8 mm, all were solitary lesions and mean age was 57.7 years.

In this study, none of the malignant or premalignant lesions was smaller than 10 mm and only one of these malignant/premalignant patients was less than 50 years old.

Postoperative morbidity was 4.3%, two patients (2.2%) had superficial infections of the surgical wound and 2 patients (2.2%) had diarrhea. Mortality was zero.

When the clinical status of the patients before surgery was compared with post-surgery status during the one-year follow-up, it was found that 78 patients (83.9%) were still suffering from the same complaints and had received no clinical benefit from surgery.

The study concludes that the surgical treatment for gallbladder polyps is a cholecystectomy and that this should only be performed in the following circumstances: clinical symptoms related to the polyp; polyp with a diameter greater than 10 mm; polyp growth observed over a short interval of time; sessile polyps or polyps with a wide insertion base; polyps a long peduncle; patients older than 50; concurrent gallbladder stones; polyps located in the gallbladder infundibulum or abnormal ultrasound findings at the gallbladder wall.

Young patients with polyps smaller than 10 mm who are asymptomatic or only have dyspeptic complaints do not require any treatment other than clinical vigilance with ultrasound every six months.

These authors from the *Universidade de Coimbra* have drawn on their experience to develop criteria for indicating surgery for the treatment of gallbladder polyps based on clinical criteria and imaging findings that will be of great utility in day-to-day practice for clinicians and surgeons faced with a pathology that is being diagnosed more and more often.

ELIAS JIRJOSS ILIAS

Member of the *Colégio Brasileiro de Cirurgiões* and Visiting Professor at the Surgery Department at the Medical Sciences Faculty at the *Faculdade de Ciências Médicas da Santa Casa de São Paulo*, SP, Brazil
eliasjilias@gmail.com

References

1. Bang S .Natural course and treatment strategy of gallbladder polyp. *anKore J Gastroenterol*. 2009 Jun;53(6):336-40.
2. Gurusamy KS, Abu-Amara M, Farouk M, Davidson BR. Cholecystectomy for gallbladder polyp. *Cochrane Database Syst Rev*. 2009 Jan 21;(1):CD007052.
3. Jang JY, Kim SW, Lee SE, Hwang DW, Kim EJ, Lee JY, Kim SJ, Ryu JK, Kim YT. Differential diagnostic and staging accuracies of high resolution ultrasonography, endoscopic ultrasonography, and multidetector computed tomography for gallbladder polypoid lesions and gallbladder cancer. *Ann Surg*. 2009 Dec;250(6):943-9.
4. Young Koog Cheon, Won Young Cho, Tae Hee Lee, Young Deok Cho, Jong Ho Moon, Joon Seong Lee, and Chan Sup Shim. Endoscopic ultrasonography does not differentiate neoplastic from non-neoplastic small gallbladder polyps. *World J Gastroenterol*. 2009 May 21; 15(19): 2361-2366.
5. Sugiyama M, Atomi Y, Kuroda A, Muto T, Wada N. Large cholesterol polyps of the gallbladder: diagnosis by means of US and endoscopic US. *Radiology*. 1995;196:493-497.
6. Ito H, Hann LE, D'Angelica M, Allen P, Fong Y, Dematteo RP, Klimstra DS, Blumgart LH, Jarnagin WR Polypoid. Lesions of the gallbladder: diagnosis and followup. *J Am Coll Surg*. 2009 Apr;208(4):570-5.
7. Park KW, Kim SH, Choi SH, Lee WJ. Park KW, Kim SH, Choi SH, Lee WJ. Differentiation of nonneoplastic and neoplastic gallbladder polyps 1 cm or bigger with multi-detector row computed tomography. *J Comput Assist Tomogr*. 2010 Jan;34(1):135-9.
8. Matos ASB, Baptista HN, Pinheiro C, Martinho F. Pólipos da vesícula biliar. Como e Quando Tratar? *Rev Assoc Med Bras* 2010; 56(3):318-321.