




## INTRACHOLECCYSTIC PAPILLARY NEOPLASM AS AN INCIDENTAL FINDING IN CHOLECYSTECTOMY

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### ABSTRACT

Report of a case of a young adult patient who underwent cholecystectomy with an incidental finding of papillary gallbladder neoplasia. This is a study whose information was collected from the medical records of a single 39-year-old male patient who underwent routine consultation and complementary tests for underlying disease, with an incidental finding of vesicular polyps on imaging, presenting significant size and, when identifying smoking as a risk factor and possible segment loss, videolaparoscopic

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cholecystectomy was chosen. The anatomopathological study identified a papillary neoplasm of the gallbladder, potentially malignant, but with no histological transformations. Cholecystectomy is the main approach to stones and vesicular polyps to avoid more serious complications. The nonspecific clinical practice does not allow the identification of the exact cause, when related to malignant neoplasia, until the anatomopathological study brings to light the development of the tumor and neoplastic histological transformations, in addition, such pathologies as gallbladder cancers are rare, but they are more common in women, in the presence of overweight and in smokers, having the same risk factors as simple calculous cholecystitis.

**Keywords:** Papillary Neoplasm. Gall bladder.

## INTRODUCTION

In recent decades, reports from the World Health Organization have revealed that the incidence of precursor lesions of Biliary Tract Carcinomas (BCCs) are gradually increasing and have been incorporated into the biliary tract tumor management algorithm (NAKANUMA Y, et al., 2022).

Fukumura, Yuki et al. (2022) in their literature review, gallbladder cancer is the 22nd most prevalent and the 17th deadliest worldwide, affecting more women than men precisely because of the female disposition to pathologies related to gallstones, including hypercholesterolemia.

Studies have suggested that chronic biliary changes and inflammation are capable of inducing neoplastic formations, resulting in subtypes of cancers (NAKANUMA Y, et al., 2022). For the WHO, the precursor lesions of biliary tract carcinomas can be divided into: microscopically identifiable biliary intraepithelial neoplasia; grossly visible intraductal bile duct neoplasia; grossly visible intracolecystic gallbladder neoplasm; gallbladder pyloric gland adenoma; and hepatobiliary mucinous cystic neoplasm (World Health Organization, 2019).

Gallbladder adenocarcinomas are highly malignant tumors with a survival rate of only 2% when it reaches stage 4B, which makes their early detection and/or identification of precursor lesions significantly important (FUKUMURA Y et al., 2022). When identified due to their clinical condition, these tumors usually metastasize at a distance (COIMBRA FJF, et al., 2020). Before the advent of cholecystectomy, carcinomas were discovered in their symptomatic phase, which consists of signs of biliary obstruction, with clinically evident jaundice, decreasing survival to 5 years close to 0% (ADDEO P, et al., 2017).

Currently, laparoscopic cholecystectomies are a substantial surgical resource in the treatment of chronic calculous cholelithiasis and acute cholecystitis that consists of the removal of the gallbladder with practicality, allowing the patient to return to their usual activities on the same day of the procedure, in addition to being associated with an increased number of findings of incidental carcinomas (ADDEO P, ET AL., 2017). Incidental gallbladder carcinoma represents 0.19% to 2.3% of all patients undergoing laparotomous or laparoscopic cholecystectomy (COIMBRA FJF, et al., 2020) and has been shown to have a positive impact in preventing late diagnosis from reducing the patient's life expectancy.

## METHODS

This is a case report study, whose information was collected through a review of the medical records of a single young adult participant. In parallel, to support the ideas discussed in this article, a literature review was carried out in scientific databases such as PubMed, Scielo and Google Scholar from the last 5 years, with a total of 20 bibliographic references obtained in Portuguese, English and Spanish. The production of this scientific article followed the regulations proposed by the National Research Council (CONEP) and was duly registered in Plataforma Brasil, with caae number 79872324.4.0000.5515, type P, version 2.

## CASE DETAILS

A 39-year-old white male patient with a history of Hashimoto's thyroiditis (using levothyroxine sodium) and irritable bowel syndrome, was undergoing outpatient follow-up of both diseases until complementary laboratory tests requested after a clinical decompensation of the intestinal disease showed incidental findings of gallbladder polyps. Abdominal ultrasonography showed a 7/7 mm polyp.

The patient had no history of other comorbidities, reporting social alcoholism and smoking 2 packs/year.

A laparoscopic cholecystectomy was scheduled for surgical treatment of the polyp. The patient received a diet on the same day with good acceptance and was discharged from the hospital one day after the procedure, with a return in 15 days to remove the stitches. The anatomopathological study of the disease showed intracholecystitic papillary neoplasia with no signs of malignant transformation.

## DISCUSSION

Gallbladder cancer is a silent, highly lethal disease and relatively rare when compared to the incidence of other cancers such as skin and breast cancers (in women) or prostate cancers (in men). The main way to diagnose these malignant neoplasms today is through anatomopathological studies of specimens obtained through cholecystectomies performed by imaging findings, which has made the incidental diagnoses of gallbladder cancer more frequent in recent decades (BENASSI AC, et al., 2022; PÉRES-MACÍAS JP, et al., 2023).

Another factor that corroborates the difficulty of early diagnosis without

cholecystectomies and anatomopathological studies is the absence of specific symptoms that identify the risk for gallbladder neoplasms. When present, the most frequent symptoms are abdominal pain, vomiting, jaundice and anorexia and, in very advanced cases, there may also be a palpable abdominal mass and hepatomegaly associated with ascites (EULUFI FC and VÉLIZ MM. Manual de patología quirúrgica, 2014). The patient in this case was not clinical, and his pathology was routinely and incidentally discovered.

Regarding the risk factors that predispose to gallbladder cancer, the main ones involve lifestyle habits such as smoking and overweight, in addition to the presence of cholelithiasis and chronic cholecystitis, advanced age, porcelain gallbladder and vesicular polyps, with the size of these being the main prognostic factor; polyps greater than 10 mm in any axis are formal indications for cholecystectomy and those with measurements between 6 and 9 mm, if associated with other risk factors, such as age or wall thickening, should receive the same approach due to the high risk of malignancy (SABADA SSP, et al., 2022). According to the literature, the patient in the case presented smoking as a risk factor, so surgical resolution was chosen, even though this polyp measured 7 mm.

Polyps that are between 6 and 9 mm, not associated with other risk factors, can be followed up with ultrasound at 6, 12 and 24 months, and, if there are no significant changes suggestive of malignancy, the patient can be discharged. For polyps with less than 55mm in the longest axis, there is no need for further investigation, although there are controversies among authors in this regard (SABADA SSP, et al., 2022; SANCHEZ, BS and FERNANDEZ HF, 2022). Although the only characteristic of the polyp identified in the reported case that drew attention was its size (7 mm in the longest axis), early cholecystectomy was chosen due to the risk of loss of the radiological segment and accelerated malignancy.

Recent studies show that the epidemiological profile of patients diagnosed with gallbladder cancer consists mostly of women and in an age range ranging from 47 to 74 years (PINHEIRO JJ, et al., 2019; COSTA LA de, 2022). In both of these characteristics, the patient in the reported case is outside the group with the highest incidence, being a 39-year-old man.

Cholangiocarcinoma is the second most common primary hepatic neoplasm and the sixth most common of the gastrointestinal tract, with two known precursor lesions:

intraepithelial neoplasia and papillary intraductal biliary neoplasia, which is the same identified in the patient in the case, where no signs of malignant transformation were identified in the anatomopathological analysis, although the presence of polyps indicated a worse prognosis if any malignant transformation was identified (JUNIOR JEM, 2020; SILVA DADG, et al., 2022).

Videolaparoscopic cholecystectomy performed on the patient in the clinical case was elective; Figueiredo WR, et al., (2019), in their retrospective cohort showed that the incidence of incidentally discovered cancer in the gallbladder after cholecystectomies is significantly higher in cases where the procedure is performed urgently, with an incidence of approximately 6.5% of cases, against only 0.38% in cases where the procedure is elective, with most of the findings being benign, such as anatomical variations or intraluminal lesions (VILLAMARÍN JFM, et al., 2021).

Aguiar, AAC de, et al. (2024), in their cross-sectional study, carried out with a population of more than 1700 patients undergoing cholecystectomies, showed that the incidence of patients diagnosed with gallbladder adenocarcinomas was low (0.7% of the total patients) and the mean age of those affected by malignant neoplasms was considerably higher when compared to patients who had only benign histological findings; In a way, the sonographic finding that resulted in cholecystectomy of the patient in the case described was fundamental for the early institution of treatment, avoiding future malignancy of the lesion.

If the diagnosis were late and cholecystectomy was postponed indefinitely, or until the symptoms caused by malignant neoplastic proliferation appeared, the prognosis would be gloomy and the treatment complex, given that in cases where the diagnosis is made late, with the cancer already constituted, 40% of the cases the patients already have distant metastasis (AGUIAR VP, et al., 2020; SCHMIDT LC and RENNA JÚNIOR NL, 2021).

Definitive treatment is synonymous with surgery for complete removal of the tumor and also its staging. Prognosis is better when cholecystectomy is performed in the early stages of the disease, in stages 1 and 2. Adjuvant therapies have been tested in more advanced cases, however, there has been no success in developing an effective method for the treatment of gallbladder cancers (CHACON AC, et al., 2023).



## **CONCLUSION**

The scarcity of recent literature on gallbladder polyps and their relationship with the development of malignant neoplasms allowed this report to draw a parallel of relevant information and reinforce existing information. Therefore, the importance of mandatory cholecystectomy in the identification of stones and polyps by imaging tests was reinforced, in order to avoid complications that are not so well known and common in the absence of signs and symptoms, a complication such as gallbladder cancer that presents silent evolution and subsequent nonspecific clinical evolution. The identification of associated risk factors is extremely important to define a problem-solving approach for the patient and allow therapeutic success for the patient, emphasizing that this pathology is more common in women, in the presence of overweight and in smokers. These risk factors are the same as those identified for acute or chronic cholecystitis.

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