Calcified Image and Pain in the Right Hypochondrium

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Abstract

Introduction: Gallbladder cancer occupies the 5th place of occurrence among all digestive system cancers. In our country, it is twice more frequent than tumors of the intra or extrahepatic principal biliary tract. The 5-year survival rate when it is limited to the mucosa is around 95%2-17. As regards epidemiology, the following conditions are considered contributing risk factors: a) chronic inflammatory processes, b) bacterial infection (Salmonella Typhi); c) gallstones (cholesterol

Introduction

Gallbladder cancer is twice more frequent than tumors of the intra or extrahepatic principal biliary tract. In our country, it occupies the 5th place of occurrence among all digestive system cancers1,17. It is twice more frequent in women after 50 years of age. The 5-year survival rate when it is limited to the mucosa is around 95%2-17.
gallstones), d) porcelain gallbladder, e) anomalous pancreatico-biliary ductal union and f) environmental factors. The most frequent histological variant is the adenocarcinoma (80%) but there are others such as the cystadenocarcinoma, the adenosquamous carcinoma or the pure squamous carcinoma, small-cell carcinoma, sarcomatoid carcinoma, lymphoma and carcinoid tumors.

Objectives

Case report and literature review.

Case Report

52-year-old woman, with no relevant clinical history consulting about 14 days of epigastric abdominal pain radiating to the right hypochondrium, associated to nausea and vomit. She went to the emergency department of a facility near her home to be seen, and an ultrasound scan is performed which reveals parietal thickening and gallstones; medical treatment is indicated which partially resolved symptoms. During the 24hs prior to the consultation at our Center, jaundice of the skin and mucosa is associated. When hospitalized, her hepatogram presented altered values (Total bilirubin 7 mg/dl; Direct bilirubin 5.6 mg/dl; Alkaline phosphatase 1350 IU/L; Glutamate oxaloacetate transaminase 330 IU/L; Glutamic-pyruvic transaminase 174 IU/L; Amylase 59 IU/L); the rest of the lab tests fall within normal parameters.

The ultrasound scan is repeated (photograph 1) focusing on the 3mm-thick gallbladder wall. A CT scan is requested (photographs 2 and 3) which shows calcium density in the wall and homogeneous gallbladder contents.

During hospitalization, fever is registered together with bilirubin level increase to 12 mg/dl; thus, transparietohepatic cholangiography is decided and internal-external biliary drainage. The patient shows progress with improved clinical condition and cholestasis parameters decrease, so CRMI and resonance angiography (MRA) are performed (photographs 4 and 5).
Tumor markers results are: CEA 5.01 ng/ml; CA 19.9: 612.2 U/ml.

In the Scientific Meeting, exploratory laparotomy is decided on with a probable diagnosis of acute on chronic cholecystitis with porcelain gallbladder vs. gallbladder cancer. During the course of surgery, porcelain gallbladder with hepatic infiltration at its fundus is discovered (photograph 6). A frozen section biopsy of hilar adenomegaly is performed which is positive for adenocarcinoma and also biopsy of retroduodenal adenopathy (deferred, with the same finding). The area is marked with titanium clips for posterior RT.

Photograph 6

The patient shows good postoperative evolution. Transparietal biliary drainage is 300 ml. and is closed 24hs. after surgery. Control hepatogram: Total bilirubin 1.6 mg/dL; direct bilirubin 1 mg/dL; alkaline phosphatase 864 IU/L; glutamate oxaloacetate transaminase 235 IU/L; glutamic-pyruvic transaminase 140 IU/L). Patient is released 72hs. later.

A self-expanding Stent was placed as definitive treatment. Three months after surgery, the patient is asymptomatic and shows normal hepatogram, only alkaline phosphatase level is increased three times. She is receiving radiation therapy and chemotherapy (Capacitabine).

Discussion

Since, in many cases, the diagnosis resembles conditions compatible with gallstones or acute cholecystitis, it is important to keep a high degree of suspicion; especially in patients with jaundice, porcelain gallbladder, parietal thickening higher than 8mm. and increased erythrocyte sedimentation rate (ESR). Our patient presented cholecystitis that evolved with cholestasis. The gallbladder wall was 3mm. thick, but parietal calcification raised suspicions as to this disease. Although the ultrasound scan is the most sensitive complementary study to evaluate the gallbladder and the biliary tract, it enables a preoperative diagnosis in only 10% of the cases. Therefore, in many occasions it is necessary to modify surgical tactics during the course of surgery. In our experience, after having decided the transparietohepatic drainage that confirmed the stenosis at the common bile duct, the laparotomic approach was chosen, since, in many patients undergoing a videolaparoscopic cholecystectomy, the diagnosis is intrasurgical and predisposes to a higher implant rate at the trocars sites.

Considering the aforesaid, it is worth highlighting the importance of a correct image interpretation, in order to adopt the most beneficial approach for the patient; the magnetic resonance cholangiopancreatography (MRCP), the CT angiography and the multislice helical CT must be performed for the correct staging of this type of tumors. The presence of hepatic or lymph node metastasis or vascular involvement of the hepatic pedicle or invasion of neighboring organs, indicate that this surgical approach must not be used. Considering that neither the spleno-portal axis echo Doppler nor the CT angiography of this patient showed vascular involvement, the exploratory laparotomy was chosen. The
discovery of positive adenopathies is a contraindication to a curative resection; thus, the decision was made to close the laparotomy, after marking for radiotherapy. A staging laparoscopy would have been possible here— it is a routine procedure in some centers (Warshaw).

Had there been a way of establishing an accurate preoperative diagnosis that gallbladder cancer was advanced, we would have only placed the self-expanding stent as definitive procedure prior to chemotherapy. All this based on the consensus establishing that cholecystectomy is enough for tumors limited to the mucosa (Stage 0: Tis, Stage I: T1a). For muscle-invasive tumors (Stage I T1b – Stage II – Stage III), cholecystectomy, lymphadenectomy of the hepatic pedicle, celiac artery regional lymph nodes, peripancreatic lymph nodes duodenal lymph nodes are performed plus the resection of hepatic segments 4b and 5. For Stages IVa (T4 N1) and IVb, extensive surgery is not indicated since the 5-year-survival rate is less than 10%, thus mini-invasive or palliative surgery is used instead. As far as chemotherapy is concerned, it has experienced many variations since the initial treatment with 5-Fluorouracil, and currently the Gemcitabine–Cisplatin combination has improved the complete response and survival rates. 3-5,6-16.

References