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Mucinous Intrapapillary Neoplasm Of The Pancreas. Case Report

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ABSTRACT

Introduction: Mucinous intrapapillary neoplasia of the pancreas was first described in 1980. Its incidental diagnosis in routine cross-sectional imaging studies has increased. Branched duct intraductal papillary mucinous neoplasms (BD-IPMN) are the most common cystic lesions encountered in practice and carry a low, but not insignificant, risk of developing cancer in the long term. Most lesions are asymptomatic and benign, but some lesions carry a significant risk of malignant transformation, so proper identification of these lesions is critical.

Objective: Develop the case report of a patient with mucinous intrapapillary neoplasia of the pancreas.

Methodology: A clinical case of a 51-year-old female who was admitted to the emergency room due to severe abdominal pain is reported, an imaging study was performed in which a mass with a diagnosis suggestive of IPNM was visualized, a splenopancreaticoduodenectomy was performed, which presented complications, for which is converted to laparotomy, a histopathologic diagnosis of IPNM is provided.

Conclusions: IPNM is characterized by a mass with an abundant amount of mucinous material, its progression is slow, its diagnosis is usually incidental when performing imaging studies, it presents a cancerous tendency with an average of 5 years, its therapy must be radical surgery to avoid recurrences, which occur in 60-70% of patients with tail and body of residual pancreas.

Keywords: *intrapapillary, neoplasia, mucinous, pancreas*

INTRODUCTION

Mucinous intrapapillary neoplasia of the pancreas (IPMN), was described in 1980 for the first time, where it had as its discoverer Ohashi, after evaluating 6 patients with the same clinical characteristics and histopathological results.(1).

IPMNs are defined as a cystic neoplasm with mucin cells, typically accounting for 1% of all pancreatic tumors and 5% of cystic neoplasms. In addition, whose prevalence has increased in the last two decades, largely due to advances in imaging studies. Therefore, they are considered as an entity that is little known in daily practice due to its low incidence(2). The World Health Organization (WHO) in its fourth edition groups this entity under an imprecise and heterogeneous terminology(3). Increase in frequency in the seventh decade of life, mainly in men with a 2:1 ratio to women, with symptoms of recurrent chronic or acute pancreatitis(4), without predisposing factors or affiliated etiology, but it should be borne in mind that these symptoms,

attributable to obstruction of the pancreatic duct by mucus are absent in 10-20% of incidental cases (5).

IPMNs grow in the main duct or its accessory branches, produce mucin, and have distinct papillary features.(6). Since growths affecting the main duct of the pancreas are associated with increased malignant potential, IPMNs are clinically subcategorized into IPMN of the main duct (MD), IPMN of its accessory branches (BD), and combined. The 2010 WHO classification subcategorizes the IPMN according to its malignant transformation and reaches represent the only preoperatively identifiable precursor of pancreatic adenocarcinoma(7). Despite this, the natural history of the IPMN is variable. Some cysts contain high-grade dysplasia (HDD) or invasive cancer (HF) that may recur or progress to metastatic disease after resection. Cysts without dysplasia or with low-grade dysplasia (LGD) may follow an indolent course(8).

At present, accurate diagnosis and treatment of IPMN poses several clinical challenges(9), But in recent years there has been progress in the knowledge of these and usually, they are usually diagnosed incidentally after the patient performs an imaging study(10). Computed tomography and magnetic resonance cholangio resonance allow the diagnosis, variety, location and possibility of determining malignancy. The treatment is Whipple resection or a cephalic pancreatoduodenectomy if the complication is in the head or neck, if it occurs in the body or tail of the pancreas we should perform a distal pancrectotomy.

The pathology is characterized by its slow progression and the risk of malignancy usually increases over the years, having a peak of malignancy in 5 years, so the importance of monitoring patients, even after being surgically operated(11).

The objective of this study is to describe the clinical case of Mucinous Intrapapillary Neoplasia of the Pancreas.

CASE REPORT

This is a 51-year-old female patient, admitted to the health home for presenting abdominal pain in upper quadrants, especially in the right hypochondrium and in epigastrium with an intensity of 8/10 on the VAS scale, to this clinical picture is added asthenia. Patient denies vomiting, nausea and jaundice.

IDENTIFICATION SHEET
Name: XXXXXX Gender: Female Age: 51 years Marital status: Married Occupation: Housewife Residence: Cañar Religion: Catholic Schooling: Primary Self-identification: Mestiza

Family Hereditary History

Mother: Hypertensive and Diabetes Mellitus 2

Non-pathological Personal History

Refers COVID -19 immunizations two doses.

Personal Pathological History

- Denies background
- Denies allergies
- Denies Traumatic
- He denies surgical interventions.
- Denies Psychiatric History

Gynecological-obstetric background

You have an active sex life, irregular menstrual cycles, lasting 4 to 6 days. 3 pregnancies (2 vaginal, 0 cesarean sections, 1 miscarriage). Menarche: 11 years, Menopause: 49 years.

Habits

Alcohol: Denies

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Tobacco: Denies
Drugs: Denies
Infusions: Refers to drinking tea often.

Physiological habits
Physical exercise: Do not perform them for joint pain.
Diuresis: Normal urine
Sleep: Normal

Physical Exam
Overall good appearance

Eyes: Isochoric pupils, normo reactive

Mouth: Wet oral mucous membranes

Thorax: Symmetrical, elasticity and expandability preserved, vesicular murmur preserved without overaggregate noise.

Heart: Rhythmic heart sounds, normo phonetics

Abdomen: Soft depressible, painful on palpation

Extremities: Symmetrical, mobile.

Neurological Examination: Vigil patient, oriented in time, space and person, no signs of neurological focality or meningeal signs, muscle strength and sensation preserved.

Physical examination finds your vital signs

- TA: 125/80
- HR: 80bpm
- FR: 20rpm
- T: 36.8
- SatO2: 92%
- FIO2: 21%
- Weight: 59kg
- Size: 1.56cm
- BMI: 24.2.

Complementary Exams
Laboratory tests such as blood biometrics, blood chemistry, kidney function, electrolytes, clotting times, tumor markers are performed.

TABLE 1: Results in blood count

Laboratory	Value	Normal Value
Leukocytes	7.3 x103/ µL	3.9-10.5 x103/ µL
Neutrophils	66%	60-70%
Hemoglobin	13.5 g/dl	12.5-16g/dL
Hematocrit	39.4%	36%-50%
Platelets	320x103/ µL	150-400x103/ µL

TABLE 2: Results in blood chemistry

Laboratory	Value	Normal Value
Total bilirubins	0.38 mg/dl	0.1-1 mg/dL
Direct bilirubins	02 mg/dl	0-0.3 mg/dL
ALT	66 U/L	10- 35 U/L
Albumin	4.9 g/dL	3.4 -4.8 g/dL

TABLE 3: Results of tumor markers.

Laboratory	Value	Normal Value
CEA	0.84 ng/L	0-3 ng/dL
AFP	5.1 ng/ml	0-9 ng/dL
CA 19.9	4.9 U/ml	0-35/ml

Subsequently, imaging studies such as endoscopic ultrasonography are performed where we can show a mass in the tail of the pancreas and at the same time we show a thickening of the walls of the organ.

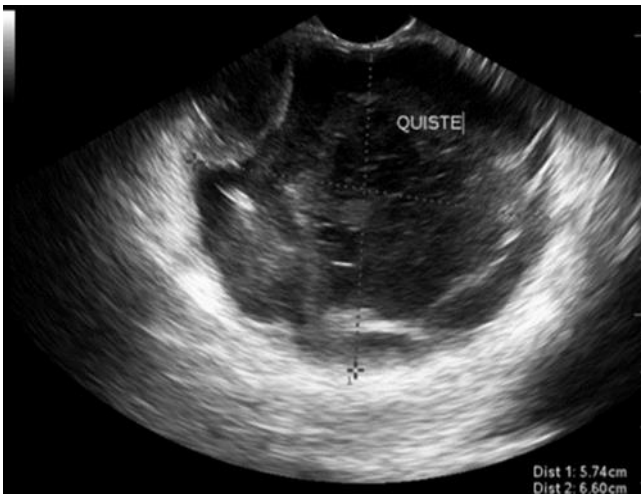

FIGURE 1: Solid-cystic mass in the tail of the pancreas, with thickening of the wall, mixed echogenicity, which has no vascular components and calcifications.

Contrasted abdominal CT showed a rounded cystic lesion in the tail of the pancreas.

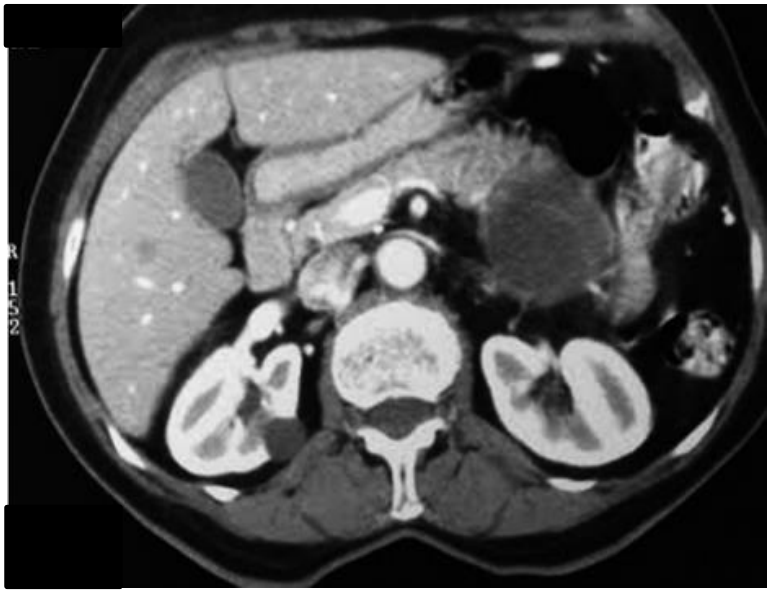

FIGURE 3: Solid-cystic mass in the tail of the pancreas.

On September 25, 2022 patient is admitted to hospital home for scheduled distal pancreatectomy surgery plus splenectomy. Surgery is scheduled for September 26, 2022 in which there is a conversion to laparotomy plus Jackson Pratt drain. After surgery, the patient is admitted to the Intensive Care Unit for observation, laboratory tests are performed and subsequent post-surgical evolution, hospital discharge is decided on October 2, 2022 with a diagnosis of Mucinous Intrapapillary Neoplasia of the Pancreas due to histopathology with progressive evolution with treatment, stable condition, and good prognosis.

Surgical Intervention

Elective surgery: Distal pancreatectomy plus laparoscopic splenectomy.

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Surgery Performed

Distal pancreatectomy plus splenectomy plus conversion to Pfannenstiel type laparotomy of 15cm 25cm supra infraumbilical middle incision, plus Jackson Pratt drain. In surgical findings, mucinous tumor is found at the level of the tail of the pancreas of 10x10cm in diameter, in addition to lesions at the level of the mesenteric vein with active bleeding.

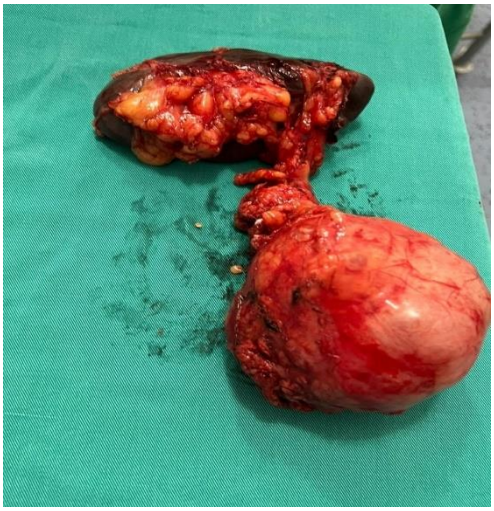

FIGURE 3: Surgical piece. Mucinous tumor at the level of the tail of the pancreas of 10x10cm.

DISCUSSION

Within the literature it is found that mucinous intrapapillary neoplasia of the pancreas is a pathology that is usually diagnosed incidentally when an imaging study is performed on the patient.(2) . However, in this case symptoms are reported in the patient, mainly intense abdominal pain that leads to request an imaging study and reveal a mass in the pancreas(3). Due to transoperative complications, a conversion to laparotomy is performed, the patient is admitted to the intensive care unit for observation and her evolution is satisfactory, for which she is discharged from hospital 9 days after admission. Histopathological studies then reveal that it is a mucinous intrapapillary neoplasm of the pancreas(3).

In 2019 the authors Jayakrishnan, Pandya and Monga report a clinical case of an 81-year-old male patient who enters the emergency room for a clinical picture of abdominal pain and when performing an imaging study the presence of a mass of 12x7 mm in the head and body of the pancreas is visualized, a pancreatoduodenectomy laparoscopy is performed and a diagnosis of colloid carcinoma of the pancreas and a neoplasm is determined by histopathology intrapapillary mucinous of the pancreas(10).

Likewise, in 2021 the authors Cruz-Camarillo, et al. They describe two clinical cases of patients with clinical manifestations of jaundice and weight loss in which mucinous intrapapillary neoplasia of the pancreas is determined as a diagnosis(1). The doctors point out that this pathology is characterized by the abundant segregation of mucinous material and also of slow progression of the disease until it becomes cancer in an approximate time of 5 years. About 50% of pancreatic lesions found on imaging studies are thought to be suggestive of MPN(1).

A case report by authors Abdelhakim Harouachi, et al. is published in 2022. In which a 48-year-old female patient is diagnosed with a mucinous intrapapillary neoplasm of the pancreas. The uniqueness of this clinical case is that it was a mass whose lengths were 185x128x190mm. A splenopancreatectomy was performed on the patient and there was no cancer progression(12). It is important to remember that it is not common to find a large mass that is NMPI, so the report of this clinical case is transcendent and thus take into account this information for possible future diagnoses(13).

Radical surgical management and strict follow-up for these clinical cases is important, thus avoiding recurrences, which occur in about 60-

70% in mass in the body and tail of the residual pancreas. (14).

For example, in elderly patients, the morbidity and mortality associated with surgical resection of these cysts may outweigh the benefits of resection. Therefore, doctors seek a balance between aggressive treatment to prevent cancer progression and the undue burden of overtreating indolent lesions.(15). This balance has been addressed in the surgical community through multiple iterations of the International Association of Pancreatology's consensus guidelines, which aim to classify suspicious IPMNs based on the predicted risk of malignancy and offer recommendations on which lesions should be resected and which can be monitored.(14).

The first International Consensus Guidelines (ICG), drafted in 2006, recommended resection of the main duct IPMN (MD-IPMN) and the secondary duct IPMN (BD-IPMN) with dilated main pancreatic duct (MPD), mural nodules, those associated with jaundice, or lesions > 3 cm. These protocols were sensitive, but lack specificity which results in many unnecessary resections of benign lesions.(15).

The updated 2012 guidelines established the concepts of high-risk stigma (HRS) and features of concern (WF) to distinguish features that require immediate surgical resection from those that require further investigation using endoscopic ultrasound (EUS) before any surgical decision can be made. (11). Multiple validation studies have demonstrated negative predictive values (NPV) of GCI ranging from 82% to 92% in 2012; however, reported positive predictive values (PPV) range from 32% to 85%, limiting their usefulness(9).

CONCLUSIONS

The IPMN is characterized by a mass with abundant amount of mucinous material, its progression is slow, its diagnosis is usually incidental when performing imaging studies, it presents a carcinogenic tendency with an average of 5 years, its therapy must be radical surgical to avoid recurrences, which occur in 60-70% of patients with tail and residual pancreas body.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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