



Case report

Symptomatic pancreatic lipoma managed with a metallic biliary stent:
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ABSTRACT

Introduction: Mesenchymal tumors comprise only 1 to 2% of all pancreatic tumors, being lipomas a rare variant of mesenchymal tumors of the pancreas.**Presentation of case:** This is the report of an 82-year-old woman who presented at the medical emergency room in a fourth level clinic with five days of nausea evolution, emesis, jaundice, coluria, acholia, and abdominal pain in the right hypochondrium. Diagnostic imaging and ultrasonography discovered and characterized a significant dilation of the intra and extrahepatic bile duct, caused by the presence of a mass in the head of the pancreas of lipomatous origin. The obstruction was successfully managed with a metallic fully covered removable biliary stent.**Discussion:** Some studies have reported the incidence of pancreatic lipoma being 0.08% and 0.012%, and the vast majority of them (>95%) are asymptomatic and properly handled without intervention, however, symptomatic tumors require surgical treatment. In our case, the surgical treatment was not suitable because of her multiple comorbidities, cardiovascular risk and advanced age. Our management continued to be a minimally invasive approach, without general anesthesia and good postoperative results.**Conclusion:** To the best of our knowledge we report the first case of symptomatic pancreatic lipoma in Colombia with unique management, and the second in Latin America.

1. Introduction

The majority of both benign and malignant pancreatic neoplasms arise from pancreatic epithelial cells [1], even so, mesenchymal tumors comprise 1 to 2% of all pancreatic tumors and lipomas are a rare variant of mesenchymal tumors of the pancreas [2]. Pancreatic Lipoma (PL) is a benign mesenchymal tumor consisting of mature adipose cells and thin collagen capsule [2]. It is known that the majority of them are asymptomatic; but some can produce pancreatic or biliary obstruction, or both [3].

We report the management of the first case of symptomatic PL in Colombia; the second in Latin America [4]. This work has been reported in line with the SCARE criteria [5].

2. Case report

This is the report of an 82-year-old woman who presented at the

medical emergency room in a fourth level clinic with 5 days of evolution of nausea, emesis, jaundice, coluria, acholia, and abdominal pain in the right hypochondrium; without any additional symptomatology. Her medical history included: hypertension, type two diabetes mellitus, dyslipidemia, urinary tract infection, ex-smoker, obesity, and chronic obstructive pulmonary disease gold B (did not require oxygen) due to chronic exposure to wood smoke and cigarette. During his hospital stay, internal medicine service had to continually intervene due to irregularities (high values) in his blood pressure figures. Her main findings laboratory testing were: Alanine Aminotransferase: 477 IU/L Amylase: 117 IU/L Aspartate aminotransferase: 517 IU/L, Alkaline phosphatase: 517 IU/L, Total bilirubin: 2,81 mg/dL, Direct bilirubin: 2,37 mg/dL, Indirect bilirubin: 0,44 mg/dL.

Her total abdomen ultrasound reported a dilation of the intrahepatic bile duct, common hepatic duct, and common bile duct; which reaches 14 mm. The gallbladder was markedly distended, with a longitudinal diameter of 14 cm * transverse diameter of 6 cm and a thickness of up to

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2.7 mm. Murphy's ultrasound were positive. There was a moderate amount of bile mud inside the gallbladder. The exam concluded the presence of hydrocholecyst and intra and extrahepatic bile duct dilation.

Then, a magnetic resonance cholangiopancreatography (MRCP) was performed and reported significant dilation of the intra and extrahepatic bile duct with a transverse diameter of the common hepatic duct of 15 mm (Fig. 1), with obstruction of the common bile duct as a consequence of a concentric stenosing lesion and the presence of a hyperintense image on T1 and T2 at the level of the head of the pancreas, of approximately 4.5 cm * 3.4 cm (Fig. 2), which suppresses fat suppression sequences compatible with lipoma. There was distention of the gallbladder without evidence of thickening of its walls or stones inside. No filling defects of the bile duct lumen suggestive of lithiasis.

Computed tomography (CT) of the abdomen and pelvis focusing on the pancreas showed a distended gallbladder with a transverse diameter of 6.0 cm. No endoluminal lesions. The common bile duct reached a diameter of 1.5 cm and the uncinate process of the pancreas visualized a markedly hypodense image of fat density measuring 4.8 cm * 3.7 cm * 3.4 cm. It was concluded that there was intra and extra-hepatic bile duct dilation, and it might be a tumor of lipomatous origin in the head of the pancreas that conditioned hydrocholecyst.

Consecutively, biliopancreatic ultrasonography (EUS) was requested and a biopsy was taken. This procedure was performed by an experienced gastrointestinal surgeon and endoscopist using the radial echoendoscope: Pentax Noblus Hitachi Aloka Medical, Ltd., Tokyo, Japan, L2E-EA045-8 EZU-FS1A. The endoscopic vision showed a significant deformity of the antrum and duodenum due to extrinsic compression. The body and tail of the pancreas had a salt and pepper appearance; 2.5 mm wirsung without lesions inside. In the head of the pancreas, there was a predominantly hyperechoic heterogeneous lesion

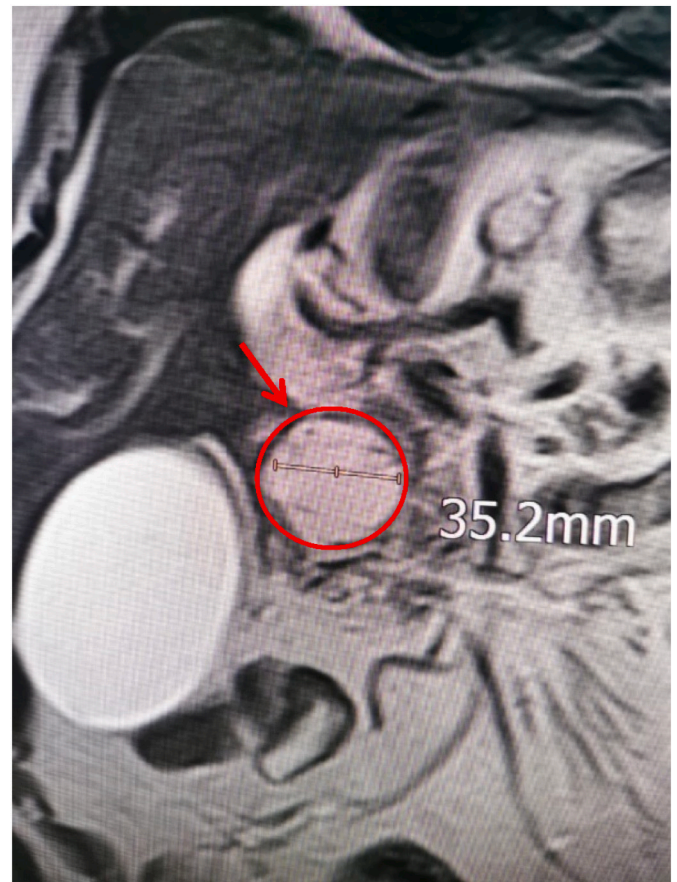


Fig. 2. Here we show her abdominal resonance with contrast where the mass of pancreatic lipoma is evidenced.



Fig. 1. It is evidenced a Pancreatic Lipoma mass pointed by the arrow, compromising the bile duct.

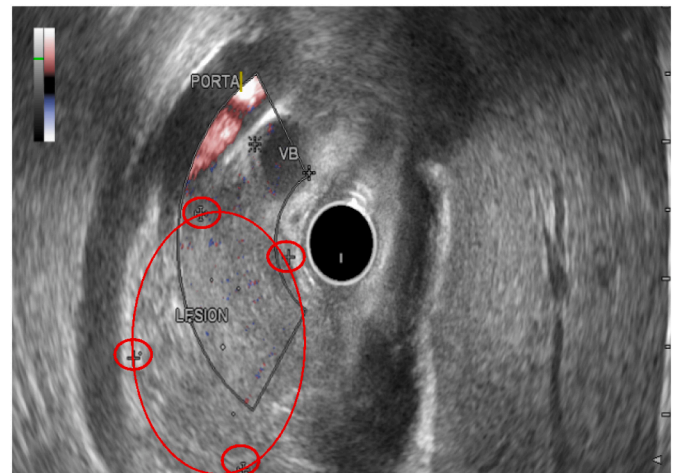


Fig. 3. The echoendoscopy is showing a heterogeneous lesion in the head of the pancreas obstructing the bile duct. The area that encompasses the lesion is demarcated by the 4 crosses, showing the mass circumference.

(Fig. 3) measuring 35 mm * 30 mm, with well-defined borders whose elastography was in color blue-green (Fig. 4). The transduodenal puncture was performed guided by echoendoscopy with needle No. 22. Acquire™, Boston Scientific Corporation, Natick, MA, USA. The results of the biopsy reported fragments of mature fibrofatty tissues compatible with the clinical and endoscopic diagnostic impression of lipoma.

As she was not a candidate for pancreaticoduodenectomy, therefore,

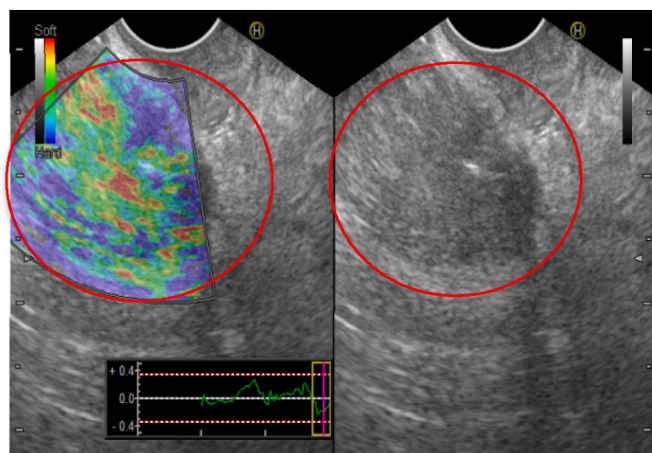


Fig. 4. Echoendoscopy and qualitative elastography showing a blue-green color that indicates benignity. The lesion is circled in red in both sides of the image. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

endoscopic retrograde cholangiopancreatography (CPRE) was performed by an experienced internist and gastroenterologist placing a Wallflex Biliary stent of 10 mm * 60 mm ref. M00570480. The procedure proceeded uneventfully. After clinical improvement, the patient was discharged.

On the 11th of October 2021, the aforementioned patient arrived again with adynamia, drowsiness, and upper abdominal pain. Her laboratory tests showed an elevated glycaemia and an alteration in liver profile; suggesting obstructive symptoms.

A transparietohepatic cholangiography evidenced that the stent expanded without complications. Then, hepatotropic viruses were taken with negative results. She presented moderate hypokalemia that was resolved on the 15th of October (final values 3.06). Had 1: 160 positive antinuclear antibodies, negative asthma, normal immunoglobulin G, negative cytomegalovirus, pending Epstein-Barr virus. It was very likely autoimmune etiology.

A percutaneous liver biopsy was done using a N° 16 gauge core needle in the segment VI of the right lobe, getting 2 cylinders, which were sent for histopathological study. Biopsy results reported a necroinflammatory disease with interface hepatitis stage 2 out of 6 according to the modified ISHAK-KNOEDLL scale.

3. Discussion

Lipomas are benign tumors of fat adipocytes that present as soft, painless masses most commonly seen on the trunk and upper extremity, but can be located anywhere on the body where normal fat cells are present. Their size usually ranges from 1 to 10 cm and their precise cause is unknown [6].

Intestinal lipomas (IL) are benign, slow-growing mesenchymal neoplasms arising from adipose connective tissue in the bowel wall. Their incidence was between 0.035% and 4.4% in large autopsy series while colonoscopy studies put the incidence at between 0.11% and 0.15% [7].

Approximately 65–75% of intestinal lipomas are located in the colon, 20–25% occur in the small bowel; being the second most common site. The stomach is the third most common site and they usually appear in the antrum. Lipomas in the esophagus and duodenum are less common [8]. Lipomas in the pancreas (PL) are a very rare entity. In 2006, Hois [9] et al. reported an incidence rate of PL of 0,08%, and in 2016, Butler [3] et al. reported an incidence of 0,012%; which is a comparable incidence, confirming that PL is a rare finding. The vast majority >95% of PL are asymptomatic [3]; however, some of them can produce pancreatic or biliary obstruction or both. In our case, PL was

symptomatic with an intra and extrahepatic bile duct dilation related to the effect of the mass. Despite being a benign entity, in our case PL had an aggressive behavior due to compromise of the bile duct and pancreatic duct. In this old adult patient, the greatest challenge was her age, and that she debuted with obstructive jaundice, which forced the specialists to rule out a periampullary neoplastic pathology.

Regarding diagnostic imaging, Butler et al. [3] reported in their retrospective study that 68 PL were diagnosed by CT scans, of which 64 were performed with intravenous contrast. It is also noted that six PL were diagnosed with MRI without contrast media and no PL was diagnosed by ultrasound. In our reported case, we made a complete analysis of the PL using ultrasound, scan, magnetic resonance, and EUS with biopsy allowing us to better characterize the PL mass, clarify the etiology of the stenosing lesion of the common bile duct; since it could be of neoplasm or inflammatory origin.

Once PL was diagnosed, knowing what to do is important. Management depends on the clinical presentation of the patient and the size of the lesion.

Lipomas are conservatively managed with follow-up imaging especially when the lipoma has well defined margins and causes no obstruction to the pancreatic duct or common bile duct [10]. Both Raut Ch et al. [11] and Butler et al. [3] also concluded that the majority of PLs are properly handled without intervention and that small and asymptomatic lipoma can be observed. However, large and symptomatic tumors require surgical treatment being the major complications obstruction, jaundice, or hemorrhage, all of them related to the effect of the mass. Raut and Fernandez del Castillo [11] provided surgical treatment for symptomatic PLs and the options are enucleation, distal pancreatectomy, pancreatoduodenectomy, and palliative bypass.

In our case, the surgical treatment was not suitable because of her multiple comorbidities, cardiovascular risk, medical history and advanced age. For that reason, an endoscopic retrograde cholangiopancreatography with metal biliary stent was performed improving the symptomatology and laboratory testing, with no need of general anesthesia.

4. Conclusions

Pancreatic lipomas are a very rare entity. We report a case of a symptomatic PL which was addressed by performing a biliary drainage, and with a metal stent. To the best of our knowledge, this is the first reported case of symptomatic PL in Colombia, the second in Latin America and, the first to be managed with a metallic biliary stent.

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Ethical approval

In our institute, the approval of the ethics committee for the retrospective analysis of a clinical case report is not required.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this

journal on request.

Author contribution

All authors contributed in the same way: study conceptualization, methodology, design, data analysis, writing - original draft and writing, review & editing.

Research registration

The submitted case report is not a research study.

Guarantor

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Declaration of competing interest

None.

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