

Report of a case of pancreatic hemangioma: A difficult preoperative diagnosis

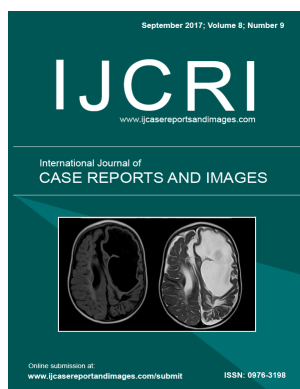
AL Hashmi Al Warith, Lagrange Xavier, Fara Régis, Camerlo Antoine

ABSTRACT

Hemangiomas can be found in various organs in the gastrointestinal tract but are rarely described in the pancreas. We report here a case of 71-year-old female who presented on abdominal computed tomography (CT) scan an incidental finding of cystic lesion in the tail of the pancreas. Follow-up magnetic resonance imaging scan after three months showed well demarcated multi loculated lesion increasing in size comparing to the last CT scan. The patient underwent laparoscopic distal pancreatectomy with splenectomy. The pathological analysis of the specimen showed a pancreatic hemangioma with no features of malignancy. The clinical presentation, radiological features and the modalities of diagnosis are here discussed.



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CASE REPORT

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Keywords: Endoscopic ultrasound, Hemangioma, Pancreatic cyst

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INTRODUCTION

Pancreatic hemangioma is a rare cystic lesion of the pancreas. A few cases are reported in literature. The radiological features of pancreatic hemangioma overlap with other cystic lesions of the pancreas like mucinous cystadenoma and intrapapillary ductal mucinous neoplasm of the pancreas [1–4]. Thus, most of the cases of pancreatic hemangioma end up in surgical resection due to the uncertainty of the diagnosis. We discuss here the ways to avoid pancreatic resection of pancreatic hemangioma.

CASE REPORT

A 71-year-old female with a past medical history of thyroidectomy and diverticulosis presented to the emergency department with left iliac fossa pain.

Computed tomography scan showed signs of diverticulosis without any complication and incidental finding of cystic lesion in the tail of the pancreas. The patient was transferred to our center for further follow-up and investigation.

Clinical examination on admission revealed healthy looking women, comfortable, abdomen soft and no abdominal masses palpable. Blood tests including lipase, CEA and CA 19-9 were normal. Computed tomography scan and magnetic resonance imaging (MRI) scan showed a 19-mm cystic multi loculated lesion in the tail of the pancreas which was initially thought to be a serious cystadenoma. We decided to follow-up the lesions with MRI scan in three months' time because of atypical characteristics of the lesion. Magnetic resonance imaging

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(MRI) at three month showed 24 mm cystic loculated lesion (increasing in size comparing to the last CT scan), well demarcated with a thick and contrast enhanced septa (Figure 1). No infiltration to the surrounding structure and no communication with the main pancreatic duct were described. Endoscopic ultrasound showed a 25-mm cystic lesion with same characteristics as on MRI scan and particularly did not find intramural nodule (Figure 2). For technical reason the puncture biopsy was not possible.

Since a diagnosis of pancreatic mucinous neoplasia could not be ruled out, a decision to perform pancreatic resection was made. Laparoscopic distal pancreatectomy with splenectomy was done. Postoperative course was uneventful and the patient was discharged without complications five days after surgery. The histopathological report revealed hemorrhagic cystic lesion measuring 2 cm, pathological features resembling pancreatic hemangioma without any features of malignancy (Figure 3).



Figure 2: Endoscopic ultrasound showing lobulated cystic lesion in the tail of the pancreas with no Doppler signal.

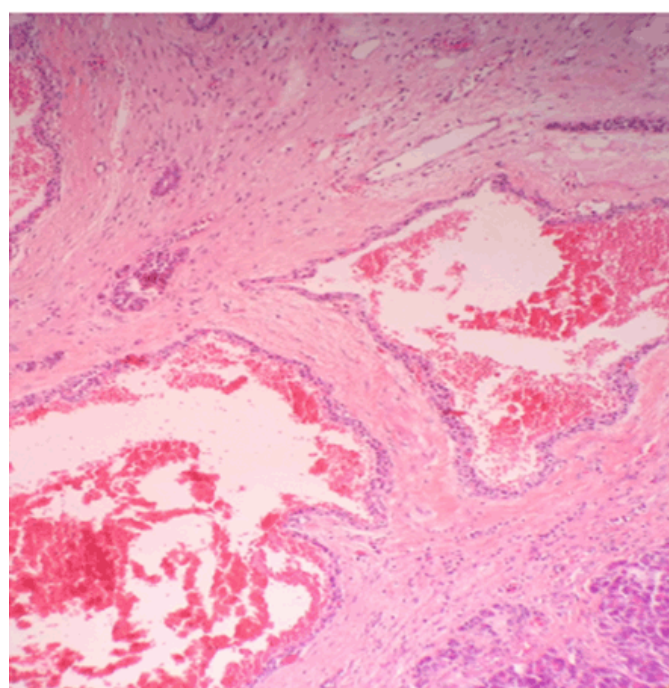


Figure 3: Microscopic examination showing vascular cavities filled with blood surrounded by endothelial cells with fibrous capsule no thrombotic lesions neither features of malignancy.

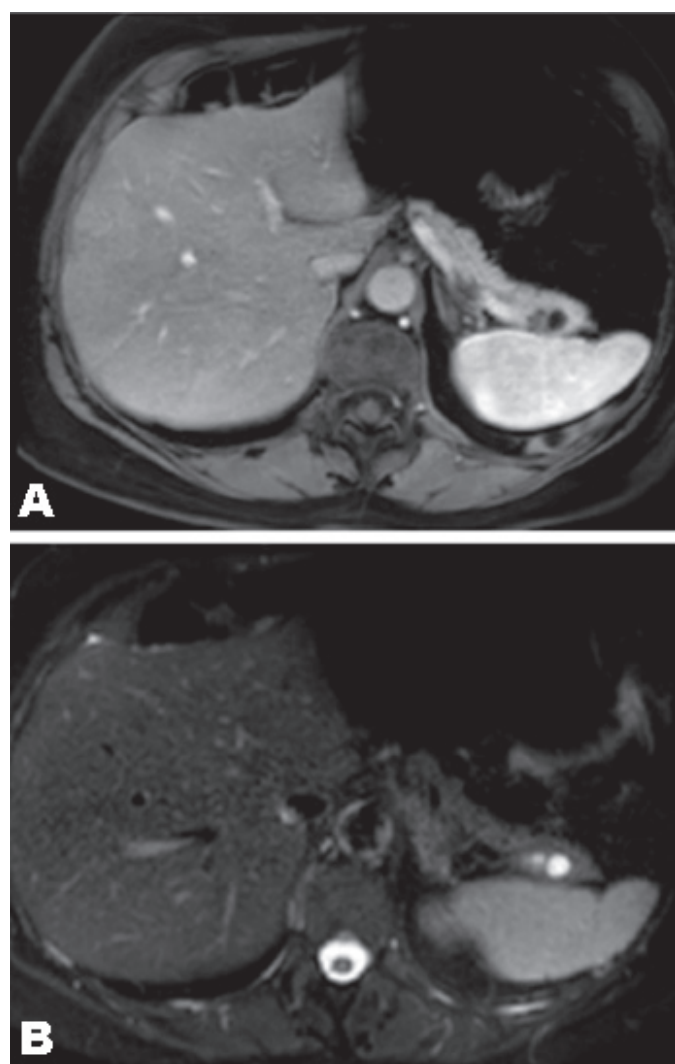


Figure 1: (A, B) Magnetic resonance imaging scan showing cystic lesion multi-lobulated located in the tail of the pancreas hypointense in T1, hyper intense in T2 with enhancement of the wall after gadolinium injection.

DISCUSSION

Hemangioma is a vascular tumor composing of blood vessels lined by epithelial tissue. They can be found in various organs including brain, liver, kidney. Vascular tumors of the pancreas are very rare. Only few cases were reported in literature. They account for 1% of the visceral hemangioma and are mostly found in females. Until now there are 14 cases of pancreatic hemangioma reported in the literature. It is difficult to establish the diagnosis preoperatively, because of the rarity of the disease and the overlapping other cystic lesions of the pancreas. Usually, patients are strictly asymptomatic and abdominal imaging showed an incidental finding of pancreatic cystic lesion.

Rarely, they present with pancreatitis or abnormalities in the liver function test [1–7].

There are several radiological modalities to diagnose pancreatic hemangioma. Ultrasound is helpful to diagnose the pancreatic hemangioma especially large size lesions (> 5 cm) as reported in nine cases. In the ultrasound they look like cystic lesion, hyper echogenic comparing to the rest of the pancreas with no Doppler signal comparing to malignant lesion which is well vascularized. In the endoscopic ultrasound they appear as cystic mass with thick septations with no Doppler signal. Most of the reported cases share the same ultrasonographic features [1].

In computed tomography scan, hemangiomas are strongly contrast enhancing in the arterial phase, peripheral irregular enhancement with central non-enhancement in venous phase, and progressive filling-in during the delayed phases [5]. Pancreatic hemangiomas appear in the CT scan as well demarcated cystic lesion enhanced in the arterial phase with no communication with main pancreatic duct. The enhancement in the arterial phase is not found in all reported cases of pancreatic hemangioma. This is explained by the slow blood flow due to the presence of AV shunting. On MRI scan it appears as a lobulated, hypo-intense mass in T1-weighted images, and shows moderate hyperintensity signal in T2-weighted image [1, 2].

As we mentioned earlier, the features of pancreatic hemangioma can overlaps with other cystic lesions of the pancreas. For that in reviewing literature, only five of the reported cases were diagnosed preoperatively. The differential diagnosis for pancreatic hemangioma includes pancreatic pseudocyst, branch duct IPMN, serous cystadenoma or mucinous cystadenoma [6].

The role of the biopsy in the pancreatic hemangioma remains controversial. Endoscopic ultrasound guided FNA has been reported in some cases with no risk of bleeding but often non contributive results. Interest of ponction would be to eliminate diagnosis as IPMN or mucinous cystadenoma.

Concerning the treatment, pancreatic hemangioma can be observed when the diagnosis is certain. In reviewing the reported cases pancreatic hemangioma have been treated with surgical resection because of uncertainty of the diagnosis in 80% of cases.

CONCLUSION

Pancreatic hemangioma is a rare benign tumor. Current imaging techniques cannot reliably differentiate it from other neoplasm of the pancreas. Most of the cases end up in surgical resections due to uncertainty of the diagnosis.

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Author Contributions

AL Hashmi Al Warith – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Lagrange Xavier – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Fara Régis – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Camerlo Antoine – Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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