

Case Report

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Rare Case of Pancreatic Lipoma Diagnosed Incidentally on CT Scan and Its Review of Literature

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Abstract

Lipomas of the pancreas are very rare. There are fewer than 25 reported cases of lipoma originating from the pancreas. We present a case of pancreatic lipoma in a 60-year-old woman who present with pain abdomen. Diagnosed incidentally on Computed tomography. CT Guided FNAC revealed lipoma, We will discuss the radiological findings distinguishing a pancreatic lipoma from other fatty lesions of the pancreas and provide a brief review of literature.

Introduction

The first histopathologically confirmed case of pancreatic lipoma (located in the head) was published in 1989 by Bilard [1]. Mesenchymal tumours, among others lipomas, constitute 1% of all pancreatic tumours. The rarest are those which include fatty tissue (lipoma, liposarcoma). The majority of lipomas have characteristic features visible during imaging which allow their differentiation from other lesions [2]. Identification of such features together with the lack of clinical symptoms allow, in most cases, correct diagnosis without the necessity of histopathologic confirmation [3].

Case Report

A 60 yrs old female presented with complaint of pain abdomen in emergency department. On physical examination, epigastric and left hypochondrium tenderness was present. USG examination was advised to see the cause and ultrasound revealed few hypoechoic areas in spleen. The possibility of Splenic laceration/infarct was considered. Hemogram, serum amylase, serum lipase and liver and renal function tests were all normal. Patient don't have any history of trauma. Further Contrast-enhanced CT was advised which showed few small non-enhancing wedge shaped areas in spleen with an incidental homogeneous small well defined focal lesion measuring (about 4×3 cm) in the pancreatic head. The lesion was of fat density on non-contrast study which shows no peripheral or internal contrast enhancement on contrast study with no alteration in density (Figure 1). A retrospective USG revealed that the lesion was hyperechoic. Diagnosis of pancreatic lipoma was made on the basis of these findings. Further CT guided FNAC was performed whose findings were suggestive of lipoma (Figure 2).

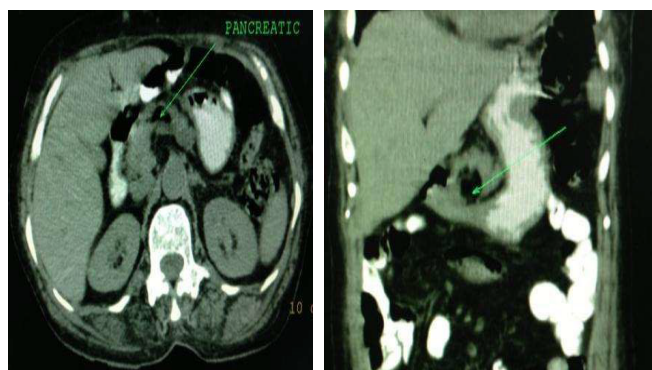


Figure 1: NCCT Axial and coronal Image-showing fat density lesion in pancreatic head region.

Discussion

The most frequent pancreatic cancer is adenocarcinoma, constituting 85% of all cases. Tumours other than ductal carcinoma constitute 5-15% of cases and tumours of mesenchymal origin amount to approximately 1%. The last tumour group includes also tumours originating from, fatty tissue (lipoma, liposarcoma). Lipomas are formed from mature fatty tissue surrounded by a fibrous capsule. In the human body lipomas occur in locations where fatty tissue is present; in the abdomen, most frequently in the digestive tract. The imaging shows pancreatic lipomas as well defined, homogenous lesions without infiltration of peripancreatic fatty tissue. On ultrasound (US), lipomas are usually hyperechoic, although some lesions may demonstrate hypoechogenicity [4,5]. Legmann et al. [6] identified the characteristic features of pancreatic lipoma on CT scans, such as homogeneity, low density of the lesion (amounting from -120 HU to -80 HU), its well-defined borders (without infiltration of intra- and extra-pancreatic structures) and lack of contrast enhancement (central and peripheral) [4-8]. In this study there was no case of unenhanced CT examination. However, low densities of lipomas demonstrated during contrast-enhanced examinations allow the conclusions that the lesions would not show significant enhancement.

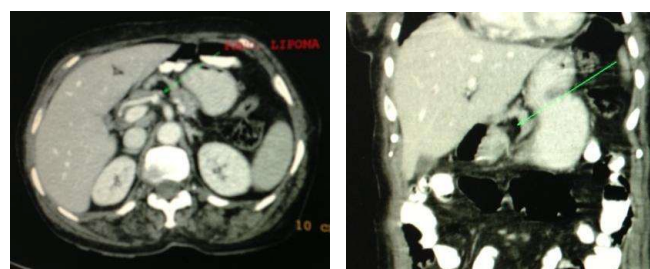


Figure 2: CECT axial and coronal images showing fat density lesion with no peripheral or internal central enhancement.

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The diagnostic problem may be differentiation between pancreatic lipoma and focal fatty infiltration of the pancreas. Although in the majority of cases both lesions have a density (CT) and signal (MR) typical of fatty tissue, focal fatty infiltration of the pancreas is a heterogenous lesion with poorly-defined margins and visible but faint, non-homogenous contrast enhancement [7,8]. From the clinical point of view, differentiation between lipomas and focal fatty infiltration of the pancreas does not have any significance, as none of these lesions requires intervention or treatment (regarding lesions <3 cm). The most important issue in these cases is to confirm the presence of fatty tissue, which excludes diagnosis of adenocarcinoma and pancreatic neuroendocrine tumour.

The only case of fatty pancreatic lesion which requires surgery is liposarcoma. These tumours are usually bigger (>5 cm, and in most cases >10 cm) than lipomas, and heterogenous, containing linear areas with a density/signal of soft tissues [9]. It is presumed that the tumours containing fatty tissue and bigger than 5 cm; tumours <5 cm but increasing in size on follow-up examinations or non-homogenous tumours, containing solid areas of soft-tissue density/signal should be removed due to increased risk of liposarcoma. Differentiation between lipoma and a rare type of lipogenic liposarcoma which is a well-separated homogenous tumour including fatty tissue may cause problems [10].

Differential Diagnosis

Replacement fatty or infiltration fatty disorder

Is the most common, and is usually a radiological finding. It consists of deposit of fatty cells in pancreatic parenchyma. This infiltration may be focal or diffuse. An ultrasound warns a pancreatic parenchyma decreased in size with increasing their echogenicity. In the CT, observed normal parenchymal obulations, separated by hypodense images representing the fatty deposit and, we will identify anteroposterior glandular diameter decreased if there is glandular atrophy.

Replacement focal fat, lipomatosis, or adipose dysplasia

May be associated with obesity, advanced age, diabetes mellitus, chronic pancreatitis, alcoholic hepatitis and Cushing syndrome. Usually an infiltrative lesion in direct contact with peripancreatic fat and many pancreatic parenchyma foci inside, unlike lipomas, which are encapsulated masses with thin fibrous and generally septate capsule surrounded by pancreatic parenchyma without retroperitoneal fat communication.

Pseudohypertrophic lipomatosis

It is a rare condition with an unknown etiology. Pseudo hypertrophy causes enlargement of an organ, due to fat content increased, despite a decrease in number of constituent cells. Therefore it's a regressive injury. It's not associated with diabetes, obesity or pancreatitis, unlike fat infiltration. Grossly appears as an enlarged pancreas and microscopically seen a replacement for fat exocrine system. MRI is very useful and shows in fat suppression sequence almost total replacement of pancreatic parenchyma by fat tissue.

Pancreatic teratoma

It is a rare condition, and findings are dependent on their component

tissues, such as fat, fat/liquid, hair/liquid or cystic components, solid or calcifications. Generally symptomatic and with the surgical treatment.

Liposarcoma

Slowly growing and progressive pancreatic destruction. Rarely malignant lesions containing fat in pancreas. Characteristics shown are 1. Tomographic density values higher than normally fat and benign lipomatosis, 2. Larger and worst borders delimitation, 3. Solid and liquid internal areas with thick septa, and 4. Enhance after intravenous contrast administration. For differential diagnosis is preferable to perform a FNA guided by US.

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