

PANCREATIC LIPOMA

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Key-word: Lipoma and lipomatosis

Background: A 53-year-old woman was admitted to our hospital with symptoms of nausea and vomiting. On ultrasonography, a hypoechoogenic solid mass in the head of pancreas was additionally found. Laboratory findings were unremarkable. Additionally, MRI of the pancreas was carried out.

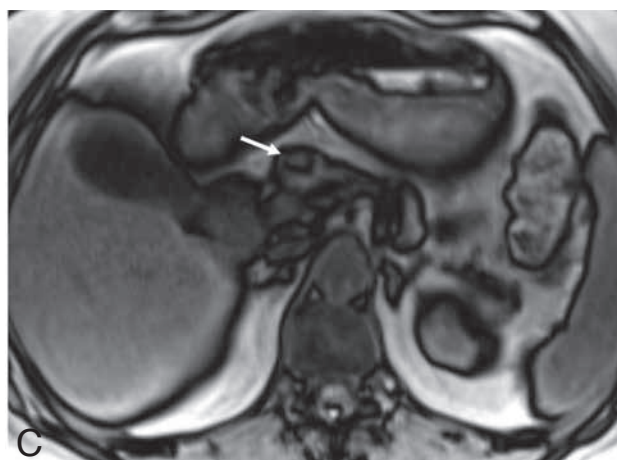
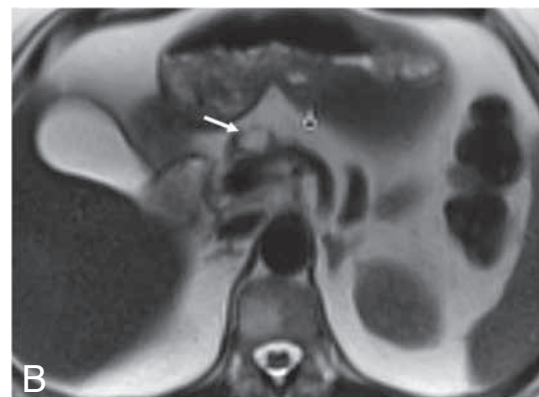
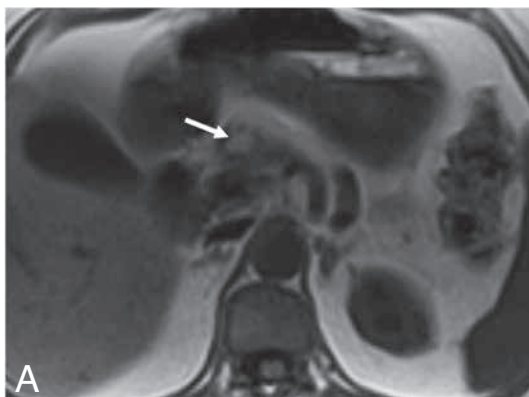
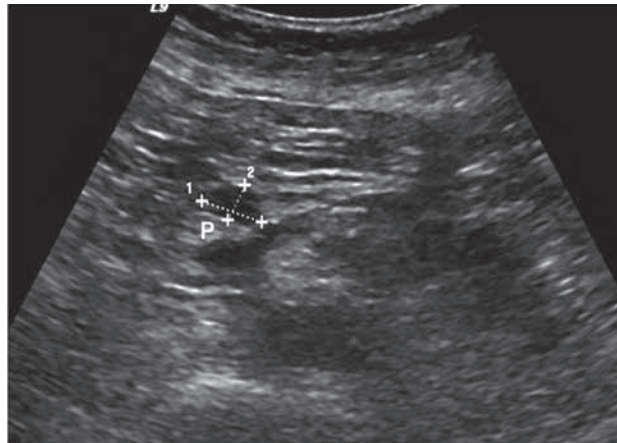


Fig.

	1
2A	2B
2C	

Work-up

Ultrasonography of the pancreas (Fig. 1) shows a well circumscribed, hypoechogenic solid lesion in the pancreatic head (P).

MRI of the pancreas (Fig. 2) reveals on T1- (A) and T2- (B) weighted images a hyperintense small mass within the pancreatic head (arrows). T1-weighted out-of-phase image (C) shows the 'India ink artifact' (sharp black line between lipoma and pancreatic tissue) (arrow).

Radiological diagnosis

Based on the imaging findings the diagnosis of *pancreatic lipoma*, revealing the "India ink sign" was made.

Discussion

Pancreatic mesenchymal tumors are rare, representing only 1% to 2% of all pancreatic neoplasms. Pancreatic lipomas are benign uncommon mesenchymal tumors, and almost all cases are discovered incidentally during CT or MRI scanning performed for other reasons.

The appearance of pancreatic lipomas on US may be challenging because it may mimic carcinoma of pancreas. Detection and characterization of these lesions on CT is very easy. However radiation is an important limitation especially in children and young adults.

Besides, MRI is a very effective method for diagnosis of fat containing lesions.

Lipomas are isointense to abdominal fat on all sequences, and show suppression on fat suppressed images. Macroscopic fat containing lesions could also be diagnosed using opposed-phase T1-weighted MRI. Chemical shift opposed-phase imaging demonstrates 'India ink artifacts' between fat- and water based components. "India ink sign" was previously described for characterization of renal angiomyolipomas in the medical literature.

To the best of our knowledge, there is not any report describing this sign for pancreatic lipoma. This artifact represents signal drop out in voxels that contain both fat and water components. It is recognized on opposed-phase MR images as a characteristic sharp black line between fat and solid organs. Thus, this sign may correctly suggest the diagnosis of lipoma in solid organs.

Bibliography

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