Available online at www.sciencedirect.com

ScienceDirect

journal homepage: http://Elsevier.com/locate/radcr

Case Report

Pancreatic lipoma with a solid nodule mimicking invasion from adjoining intraductal papillary mucinous neoplasm

Yoko Namiki MD[a,*], Eriko Maeda MD, PhD[a], Wataru Gonoi MD, PhD[a], Nobuhisa Akamatsu MD, PhD[b], Masako Ikemura MD, PhD[c], Kuni Ohtomo MD, PhD[a]

[a] Department of Radiology, Graduate School of Medicine, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8655, Japan
[b] Department of Hepatobiliary Surgery, Artificial Organ and Transplantation, Graduate School of Medicine, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8655, Japan
[c] Department of Pathology, Graduate School of Medicine, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8655, Japan

ARTICLE INFO

Article history:
Received 15 December 2015
Accepted 28 February 2016
Available online 4 April 2016

Keywords:
Lipoma
Pancreas
Intraductal papillary mucinous neoplasm
Liposarcoma
Pancreatic tumor
Hamartoma

ABSTRACT

A 74-year-old man was referred to our hospital for a mass in the pancreatic head found during screening chest computed tomography. Contrast computed tomography showed a 5-cm multicystic mass with an irregular border containing a solid component showing contrast enhancement. Caudal to this mass, a 5-cm solid mass of fat density with a nodular soft-tissue component was found. Cytology of the aspirated pancreatic fluid revealed malignant cells, and surgery was performed for suspected intraductal papillary mucinous carcinoma. Pathologic analysis of the resected specimen revealed a collision tumor of intraductal papillary mucinous neoplasm (IPMN) with high-grade dysplasia and pancreatic lipoma. The soft-tissue component within the lipoma was a nodule consisting of pancreatic tissue with inflammatory infiltration and hyalinization and was not associated with IPMN invasion.

Introduction

Although many reports of gastrointestinal tract lipoma appear in the literature, pancreatic lipoma is rare. The first report of pancreatic lipoma, published in 1989 by Bigard, has been followed by only about 50 similar reports [1,2]. Pancreatic lipomas are visualized in images as smooth masses of fat density that are histologically segmented from the pancreatic parenchyma by a thin, fibrous membrane. The actual prevalence of pancreatic lipomas is unknown, because small pancreatic lipomas are difficult to differentiate from fat infiltration of the pancreatic parenchyma. Even when a distinct pancreatic lipoma is diagnosed on imaging, it is generally followed by further imaging and is rarely resected.

Intraductal papillary mucinous neoplasm (IPMN) is a pancreatic neoplasm characterized by papillary proliferation of intraductal mucin-producing epithelium. The disease mainly affects the elderly, with increasing numbers of cases reported because of the increased use of imaging examinations. IPMNs are classified into 3 categories depending on the

Competing Interests: The authors have declared that no competing interests exist.

* *Corresponding author.*
E-mail address: namiki-sim@umin.ac.jp (Y. Namiki).

http://dx.doi.org/10.1016/j.radcr.2016.02.017

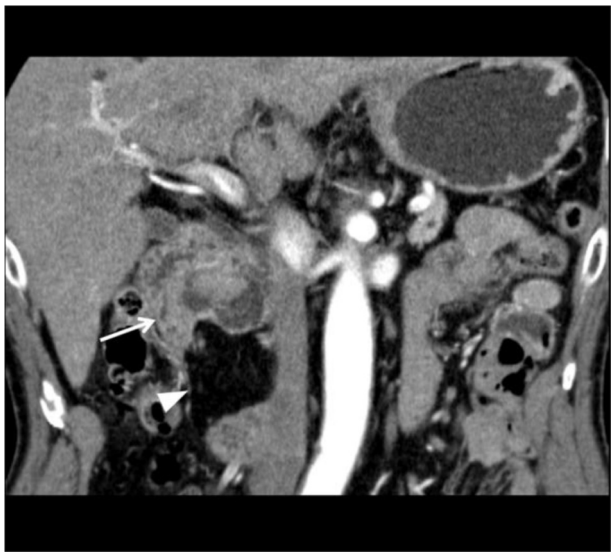

Fig. 1 – Contrast CT of the abdomen in the coronal view. The mass consists of an IPMN-like lesion (arrow) and a lipomatous lesion (arrowhead).

location of the disease: the main duct IPMN, the branch duct IPMN, and the mixed IPMN. The main duct IPMN has a high rate of malignant transformation and is generally resected. In contrast, the reported malignancy rate of resected branch duct IPMN is 25.5% (6.3%-46.5%) with invasive ductal carcinoma representing 17.7% (1.4%-36.7%) of the malignancies [3]. However, because the annual rate of malignant transformation of IPMN in the elderly is as low (2%-3%). Patients are generally followed using imaging unless obvious signs of malignancy are present.

In this report, we describe a patient with coexisting pancreatic lipoma and branch duct IPMN with a solid component. Malignancy was suspected because a soft-tissue nodule was found within the lipoma, suggesting IPMN invasion.

Case report

A 74-year-old man with a history of hyperuricemia and surgery for a chest wall lipoma was referred to our hospital because a mass was found in the pancreatic head on screening chest computed tomography (CT). Blood chemistry examination showed no abnormality including the presence of carcinoembryonic antigen and carbohydrate antigen 19-9.

Contrast dynamic CT was performed using 320-row CT (Aquilion ONE Vision Edition; Toshiba Medical Systems Corporation, Otawara, Japan). After abdominal plain CT, 100 mL of contrast material (Iopamiron 370 mgI/mL; Bayer Pharmaceuticals, Osaka, Japan) was injected within 30 seconds, and the early and late arterial phases were scanned at 25 and 45 seconds, respectively, after the start of the injection. The delayed phase was scanned 90 seconds after the start of the injection. On noncontrast CT, a 60-mm diameter multicystic mass with an irregular border was found extruding from the border of the pancreatic head.

Contrast CT showed continuity to the branch duct in the uncinated process of the pancreas, suggesting branch duct IPMN (Figs. 1-3). The main pancreatic duct was dilated to 6 mm in diameter. The mass contained a solid, 23-mm component, exhibiting contrast enhancement. Caudal to the IPMN, a 50-mm mass of fat density was observed (Figs. 1, 2C). This mass contained a nodule of soft-tissue density in the cranial area adjacent to the IPMN, showing a small area of contrast enhancement. The radiologic diagnosis was lipoma with invasion from the adjacent IPMN or liposarcoma (Fig. 2B).

Magnetic resonance imaging was performed using a 1.5T scanner (Achiewva 1.5T, Philips Healthcare; Andover, MA, USA). The multicystic mass showed hypointensity on T1-weighted turbo field echo (repetition time/echo time [TR/TE] = 3.3/1.6) and hyperintensity on T2-weighted imaging (TR/TE = 1,776/100). Magnetic resonance cholangiopancreatography revealed a dilated dorsal main duct and branch duct with continuity to the multicystic mass, suggesting a branch duct origin. The ventral main pancreatic duct of normal diameter was visualized ventral to the mass. The solid component within this mass showed mild hyperintensity on T2-weighted imaging, hyperintensity on diffusion-weighted imaging (TR/TE = 1,534/65), a reduced apparent diffusion coefficient (b-value 800), and no infiltration outside the multicystic mass (Fig. 3). The lipoma showed the same intensity as the surrounding fat tissue on T2-weighted imaging and hypointensity on fat-suppressed T2-weighted imaging (TR/TA = 1,330/88). The solid nodule inside the lipoma showed

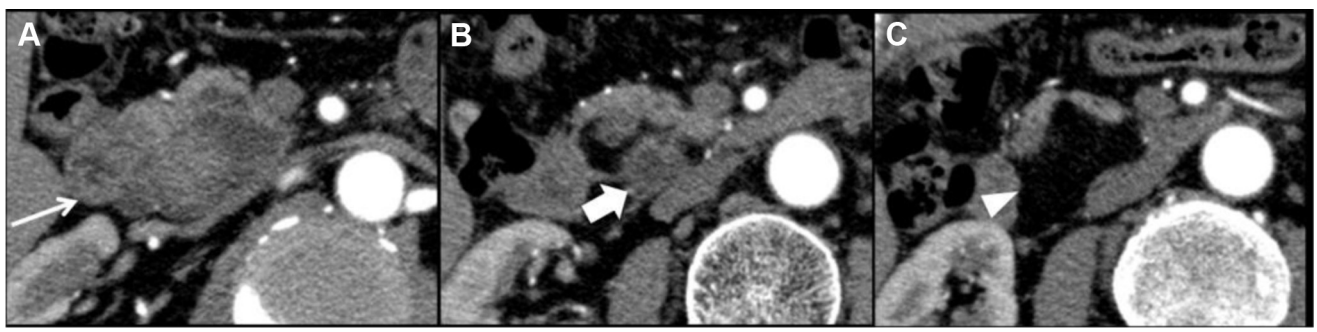

Fig. 2 – Contrast CT of the abdomen from the cranial (A) to caudal (C) direction. (A) 59-mm cystic lesion with a 23-mm enhanced nodule (arrow). (B) Soft-tissue nodule (wide arrow) within the lipomatous lesion located at the border between the cystic and lipomatous lesions. (C) Lipomatous lesion (arrowhead) is located caudal to the cystic lesion.