ACG CASE REPORTS JOURNAL

CASE REPORT | PANCREAS

Wait-and-See Policy for a Small Pancreatic Schwannoma Diagnosed With Endoscopic Ultrasound With Fine-Needle Aspiration

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ABSTRACT

Pancreatic schwannomas are very rare tumors, usually diagnosed incidentally after surgery. In literature, only 17 patients underwent endoscopic ultrasound (EUS) with fine-needle aspiration and diagnosis was reached only in 9 subjects. We report the case of a woman in whom a computed tomography revealed a mass in the uncinate process of the pancreas. EUS–fine-needle aspiration demonstrated a 1.3 × 1.1 cm hypoechoic lesion, cytology revealed sheets of spindle cells, and immunocytochemistry led to the diagnosis of schwannoma. Relying on EUS features and on the low proliferation index, a follow-up program was set. Four years later, the patient is asymptomatic and the mass is unchanged.

INTRODUCTION

Schwannomas are mesenchymal tumors derived from Schwann cells that line nerve sheaths. Their origin in the pancreas is exceedingly rare, up to now only 70 cases have been reported in the English medical literature; few cases underwent endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA).[1–3] Schwannomas originate more frequently in the pancreatic head. When symptoms occur (about one-third of patients are symptomless), they are rather vague: abdominal or back pain, weight loss, dyspepsia, nausea, etc.[1]

On computed tomography, they appear as well-circumscribed masses with a very variable appearance and contrast-enhancement pattern.[4] This variability is due to the possibility of cystic degeneration, calcifications, and hemorrhage. They can mimic the whole spectrum of pancreatic masses. Because of these misleading radiological features, presurgical diagnosis of schwannoma is difficult. They are usually removed with surgery and incidentally diagnosed after resection. In literature, only 17 patients underwent EUS-FNA, but a diagnosis was achieved in only 9 cases (52.9%).[1,2] At EUS, schwannomas usually appear as well-demarcated hypoechoic masses, sometimes harboring cystic spaces or calcifications. We describe the unusual case of a small pancreatic schwannoma, asymptomatic and incidentally diagnosed, that underwent a long instrumental follow-up, without any structural change.

CASE REPORT

A 44-year-old woman came to our attention after a transabdominal ultrasound and a computed tomography scan revealed a hypoenhancing 1.5-cm lesion in the uncinate process of the pancreas. Medical investigation had been prompted by mild crampy abdominal pain with loose stools eventually attributed to irritable bowel syndrome. Endoscopic ultrasound showed a well-defined solid hypoechoic mass (1.3 × 1.1 cm) near the superior mesenteric vein without invasion (Figure 1). Four passes of EUS-FNA with a 25-gauge needle (EchoTip Ultra; Cook Endoscopy, Winston Salem, NC) were made and the

ACG Case Rep J 2019;6:1–3. doi:10.14309/crj.0000000000000139. Published online: July 24, 2019

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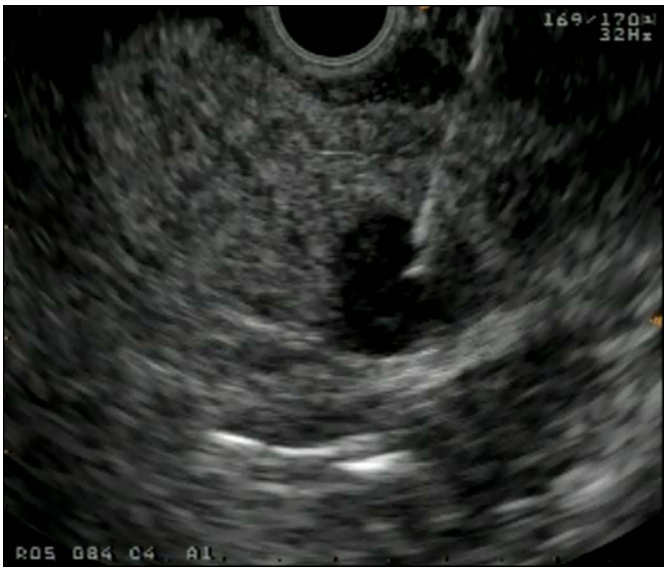

Figure 1. Fine-needle aspiration of a hypoechoic mass in the uncinate process of the pancreas.

collected material was put in 95% alcohol. The day after the procedure, the patient experienced abdominal pain with mild elevation in amylase that required hospital admission but resolved uneventfully.

Cytology revealed sheets of spindle cells and immunocytochemistry led to the diagnosis of schwannoma showing diffuse positivity for S-100 and negative staining for desmin, smooth muscle actin, CD117, and DOG-1. The proliferation rate was low (Ki67 staining less than 1%) (Figure 2). Benefits and risks of surveillance vs surgery were discussed with the patient and a follow-up program was set, mainly relying on transabdominal ultrasound with which the lesion is easily visible, thanks to the constitutional habit of the patient. Four years after the diagnosis, the patient is asymptomatic and the lesion is unchanged in size and appearance.

DISCUSSION

Schwannomas are usually benign lesions. Tumor size (diameter larger than 6.9 cm), ill-defined margins, and involvement of nearby organs and vessels are considered as predictive of malignancy, but clear cut criteria that help distinguish benign from malignant schwannomas are lacking.[1] Cystic components, calcifications, and the pattern of contrast-enhancement are considered unpredictive.

Pancreatic resection or a less invasive enucleation can be performed and, to our knowledge, have been proposed or performed to all but one patient so far.[1,2] The subject in

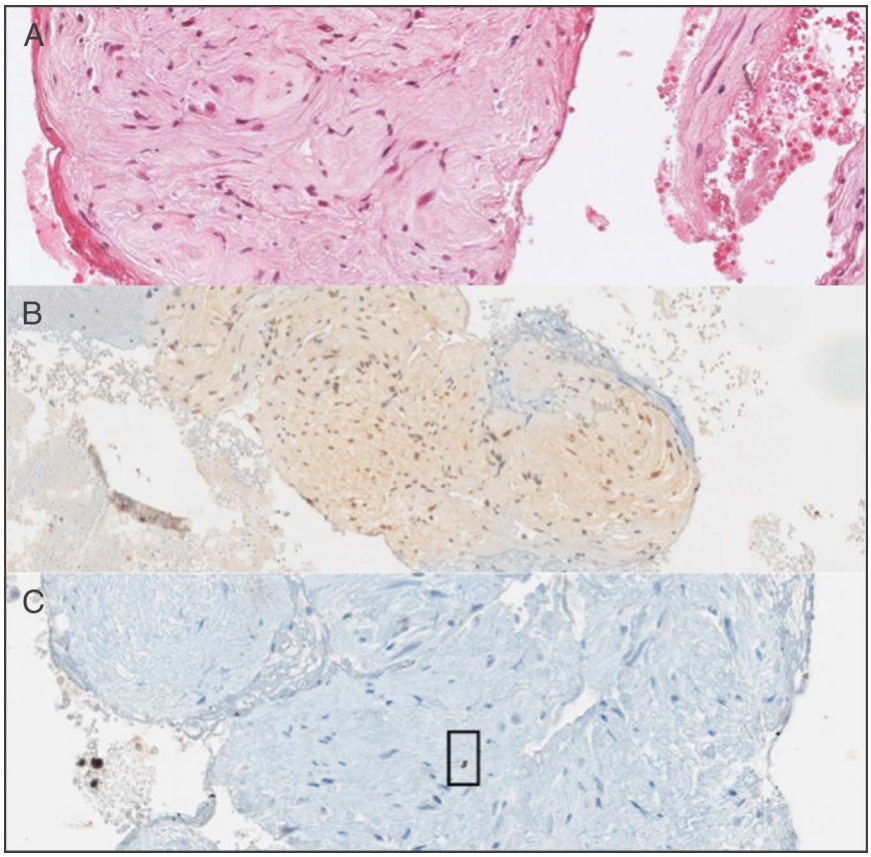

Figure 2. (A) Hematoxylin and eosin stain showing spindle cells arranged in sheets. (B) Positive S-100 immunostaining but negative for desmin, smooth muscle actin, CD117, and DOG-1. (C) Ki67 staining showing a low mitotic index (<1%).

which surveillance was undertaken had a 1.7 cm lesion in the pancreatic body that showed a 1 cm increase in size at a 11-month follow-up. A shorter follow-up (3 months) is available for a 55-year-old woman who refused surgery: the lesion did not show any change.[5] This case represents, to our knowledge, the longest follow-up, without any change, of a pancreatic schwannoma.

Relying on the existing literature, based on only 9 patients diagnosed before surgery, it is impossible to draw any firm conclusion about the opportunity of follow-up vs surgery for pancreatic schwannomas. However, we suggest that surgery can be spared to some patients with pancreatic schwannomas. In our opinion, a wait-and-see policy can be proposed and discussed with the patient provided that the lesion has a small stable size (but we cannot advise any maximum diameter), well defined margins, and few mitosis, and the follow-up is, as in our case, easy and without the need for excessive radiation exposure.

DISCLOSURES

Author contributions: M. Bruno wrote the manuscript and is the article guarantor. F. Maletta analyzed the pathology. S. Gaia, GM Saracco, and CG De Angelis edited the manuscript. L. Venezia and P. Cortegoso Valdivia searched the literature and wrote the manuscript.

Financial disclosure: None to report.

Informed consent was obtained for this case report.

Received January 5, 2019; Accepted April 3, 2019

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