Retroperitoneal schwannoma diagnosed by endoscopic ultrasound-guided fine-needle aspiration

A 59-year-old white man was referred for evaluation of epigastric pain that was radiating to his back and a 5-kg weight loss over 6 months. A computed tomography (CT) scan revealed a heterogeneous low-attenuation tumor, measuring 5 cm in size, adjacent to the celiac artery and the pancreatic body (**Fig. 1**). Sectorial endoscopic ultrasound (GF-UCT140-AL5; Olympus America Inc., New York, USA), coupled to an ultrasound unit (Prosound alfa-5 SX; Aloka), detected a retroperitoneal well-circumscribed, hypoechoic mass, which measured 5×4 cm and was located immediately above the celiac tripod (**Fig. 2**).

Endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) was performed by three passes of a 22-gauge needle (EchoTip Ultra Echo-22; Cook Medical, Winston-Salem, North Carolina, USA). Histology revealed a spindle cell tumor that was strongly immunoreactive for S-100, thereby defining it as a schwannoma (**Fig. 3**). The tumor was successfully removed despite its adherence to the celiac tripod arteries (**Fig. 4**).

A schwannoma is a tumor arising from neural crest-derived Schwann cells in the sheaths of peripheral nerves. Retroperitoneal schwannomas are very rare, comprising less than 6% of all retroperitoneal tumors [1]. They are clinically asymptomatic until the tumors reach a large size and cause compressive symptoms. Diagnosis is difficult because of their rarity, asymptomatic course, and the lack of any specific diagnostic blood test or features on imaging studies [2]. Tumor size is related to its malignant potential and to the formation of cysts [3]. Surgery is the treatment of choice and is usually curative [4]. The findings on EUS generally reveal a well-circumscribed hypoechoic mass. EUS-FNA of retroperitoneal tumors is a valuable method for the preoperative diagnosis of schwannomas [2].

Fig. 1 A computed tomography (CT) scan showing a heterogeneous low-attenuation tumor measuring 5 cm in size, adjacent to the celiac artery and the pancreatic body, that is displacing the splenic vessels anteriorly.

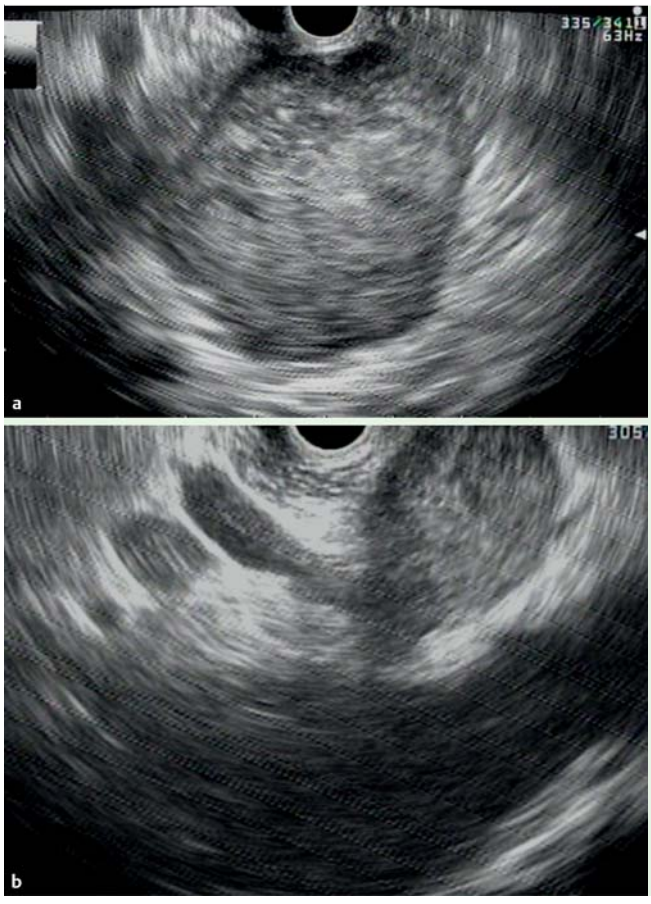

Fig. 2 Linear-array endoscopic ultrasound (EUS) showing:
a a retroperitoneal hypoechoic heterogeneous mass with well-defined borders measuring 5×4 cm;
b the absence of a hyperechoic interface between the tumor and the celiac artery, and no evidence of thrombi or collateral circulation.

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Competing interests: None

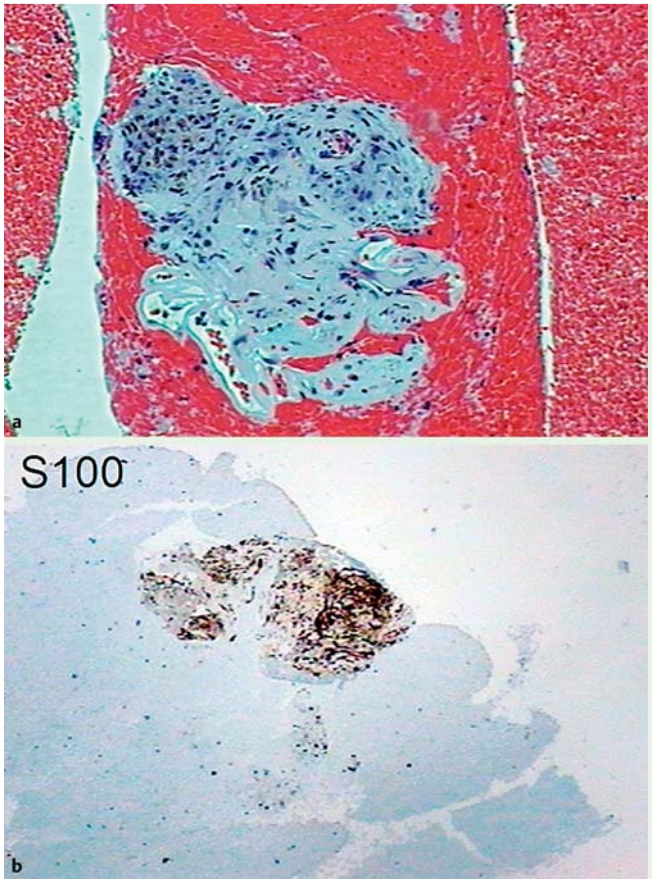

Fig. 3 Histopathological findings of the cell block specimen showing: **a** large cohesive groups of spindle cells with nuclear palisading on hematoxylin and eosin (H&E) staining (original magnification × 100); **b** diffuse nuclear and cytoplasmic on immunostaining with polyclonal S-100 (original magnification × 50).

Fig. 4 Macroscopic appearance of the cut surface of the resected tumor showing a firm, yellowish, 4.5-cm well-circumscribed, encapsulated solid tumor with focal areas of hemorrhage.

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