

Retroperitoneal Schwannoma: When EUS-Guided FNA can Avoid Surgery

Claudio Zulli^{1*}, Nadia Alberghina¹, Giuseppe Grande¹, Mauro Manno¹, Luca Reggiani Bonetti², Flavia Pigò¹, Vincenzo Giorgio Mirante¹, Santi Mangiafico¹, Rita Conigliaro¹ and Carmelo Barbera¹

¹Gastroenterology and Digestive Endoscopy Unit, NOCSAE Hospital, Baggiovara di Modena, Italy

²Department of Diagnostic Medicine and Public Health, University of Modena and Reggio Emilia-Section of Pathology, Modena, Italy

*Corresponding author: Claudio Zulli, Gastroenterology and Digestive Endoscopy Unit, NOCSAE Hospital, via Pietro Giardini 1355, Baggiovara di Modena, ZIP Code 41126, Italy, Tel: +39 0593961260; Fax: +39 0593961216; E-mail: <mailto:zulli.claudio@gmail.com>

Received date: March 25, 2016; Accepted date: June 23, 2016; Publication date: June 26, 2016

Copyright: © 2016 Zulli C, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License; which permits unrestricted use; distribution; and reproduction in any medium; provided the original author and source are credited.

Abstract

Schwannomas are rare benign tumor that arises from peripheral or cranial nerve. Commonly, they occur into the head or neck and rarely into the retroperitoneum or pancreas. Usually they are asymptomatic tumor, discovered incidentally. Final diagnosis is generally confirmed after surgical intervention. The possibility to reach the lesion by EUS and to perform FNA can avoid invasive procedures. Here we discuss a rare case of retroperitoneal schwannoma diagnosed by Endoscopic ultrasound (EUS) guided Fine needle aspiration (FNA).

Keywords: Schwannoma; Retroperitoneal tumor; Neurilemmoma; EUS-FNA

Case Report

Schwannomas are rare benign tumor that arises from peripheral or cranial nerve. Commonly, they occur into the head or neck and rarely into the retroperitoneum or pancreas [1]. Usually they are asymptomatic tumor, discovered incidentally [2]. Final diagnosis is generally confirmed after surgical intervention. The possibility to reach the lesion by EUS and to perform FNA can avoid surgical diagnostic procedures [3]. Actually, a surgical approach can be considered only with a therapeutic purpose, in case of presence of large symptomatic masses.

A 80 years-old woman referred to our unit to perform EUS-guided FNA of a retroperitoneal mass, discovered during follow-up abdominal

US for HCV-related hepatitis. CT scan confirmed the presence of a 35 × 28 mm solid, ovoid, dis-homogeneous lesion located dorsally between the left side of abdominal aorta, left renal vein and the ascending part of duodenum (Figure 1). The patient was asymptomatic, and neoplastic markers were negative. She underwent a EUS (GF-UCT 180; Olympus Co., Japan) under deep sedation, revealing a dis-homogeneous, hypo-echoic, well-bordered, 40 × 28 mm diameter mass, located between the dorsal part of duodenum and the head of the pancreas. A EUS-FNA was performed using a 22 Gauge needle, through the duodenal wall, with the no-styleset no-suction technique (Figure 2). Histological findings included fragments of tissue composed by spindle cells showing a specific immunoreactivity to S-100; DOG1 and CD117 stains were both negative (Figure 3). Final diagnosis was a schwannoma and patient was referred to a radiological follow-up.

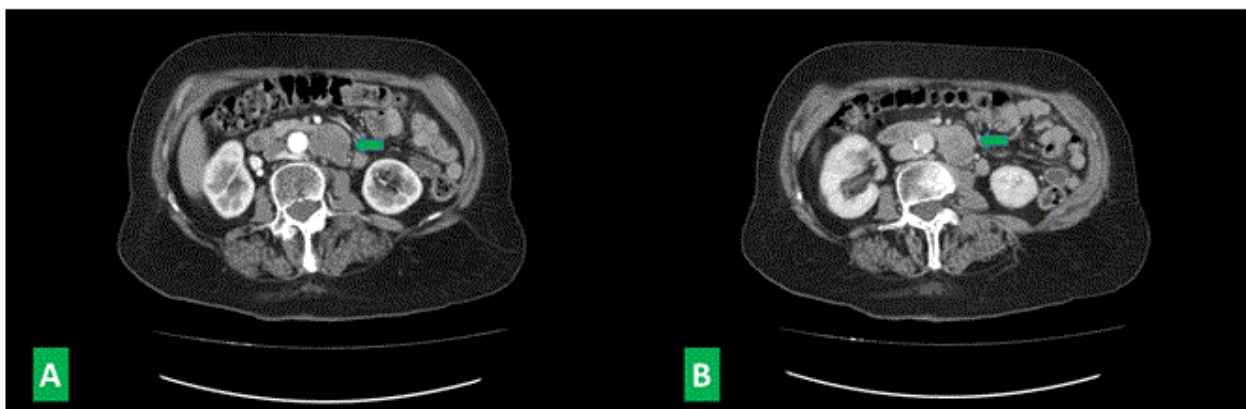


Figure 1: Contrast enhanced abdominal CT scan showed retroperitoneal roundish mass (Green arrows) with well-defined edge and no early (A) or late (B) contrast enhancement.

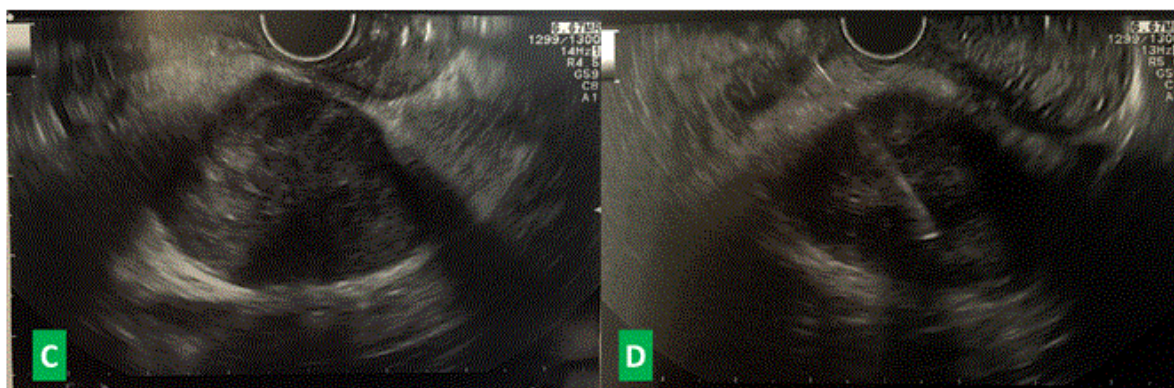


Figure 2: (C) EUS images of the dis-homogeneous, hypoechoic, well-defined, peripancreatic lesion. (D) EUS-guided FNA with 22G needle (no-needle no-suction technique).

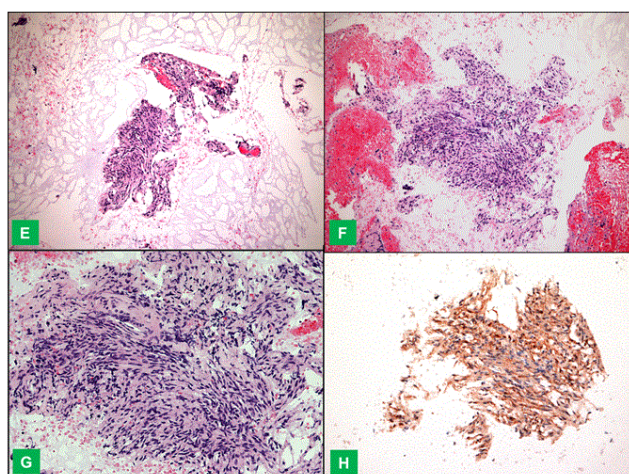


Figure 3: Bioptic fragments of tissue composed by spindle cells [Hematoxylin & Eosin stain; 4X]. G. Some fragments showed storiform pattern of growth [Hematoxylin & Eosin stain; 20X]. H: The spindle cells were positive for S100 [10X].

Schwannomas, also named neurilemmoma, are rare, benign tumors originating from Schwann cells. Retroperitoneal location is

uncommon (1-3% of all Schwannomas and almost 1% of all retroperitoneal tumors). The diagnosis can be delayed due its location, so it could appear as a giant mass [4]. Radiological findings are not pathognomonic and tissue sampling is necessary for a final diagnosis [3]. However, definitive diagnostic result is generally obtained by surgery. Our experience suggests that EUS-guided FNA represents a reliable alternative for a noninvasive diagnosis of retroperitoneal mass [5]. Surgery is mandatory only in case of symptomatic masses causing abdominal discomfort or pain.

References

1. Barresi L, Tarantino I, Granata A, Traina M (2013) Endoscopic ultrasound-guided fine-needle aspiration diagnosis of pancreatic schwannoma. *Digestive and liver disease* 45: 523.
2. Dede M, Yagci G, Yenen MC, Gorgulu S, Devci MS, et al. (2003) Retroperitoneal benign Schwannoma: report on three cases and analysis of clinicoradiologic findings. *Tohoku J Exp Med* 200: 93-97.
3. Stelow EB, Lai R, Bardales RH (2004) Endoscopic ultrasound-guided fine-needle aspiration cytology of peripheral nerve-sheath tumors. *Diagn Cytopathol* 30: 172-177.
4. Fu H, Lu B (2015) Giant retroperitoneal schwannoma: a case report. *Int J ClinExp Med* 8: 11598-11601.
5. Kudo T, Kawakami H, Kuwatani M, Ehira N, Yamato H, et al. (2011) Three cases of retroperitoneal schwannoma diagnosed by EUS-FNA. *World J Gastroenterol* 17: 3459-3464.