

Letters to the Editor

Spinal meningioma diagnosis based on transesophageal endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA)

Key words: Colorectal carcinoma. Meningioma. Transesophageal endoscopic ultrasound (EUS). Echoendoscopy

Dear Editor,

The role of transesophageal endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) in the diagnostic staging of different malignancies (1-3) has been clearly established. However, the role of EUS-FNA in the diagnosis of other neoplasias is under investigation (4). Here, we present a case of spinal meningioma diagnosed by EUS-FNA during the staging of a cecum adenocarcinoma.

Case report

An 80-year-old woman with a history of mitral valve disease, pulmonary hypertension and atrial fibrillation was studied by asthenia and ferropenic anaemia. Colonoscopy revealed a polylolubulated vegetant lesion occupying 60-70 % of the cecum, with a histopathological diagnosis of moderately differentiated adenocarcinoma. TAC showed a marked thickening of the cecum wall (5.8 x 4.9 x 3.7 cm) without any signs of obstruction. In the right

paravertebral region, between D1 and D2, an hourglass-shaped lesion of 22 x 29 x 21 mm was observed, which was growing through the spinal canal and widening the intervertebral foramen (Fig. 1). By EUS-FNA, the lesion was accessed from the back side of the oesophagus, observed in a right para-spinal arrangement a hyperechogenic and echogenic fat rounded mass (30 mm diameter); 3 passes were conducted on this mass with a 25-gauge needle (ECHO-25-HD Cook®). The puncture was analysed by an *in situ* pathologist and was made by slow in-and-out stylet move-

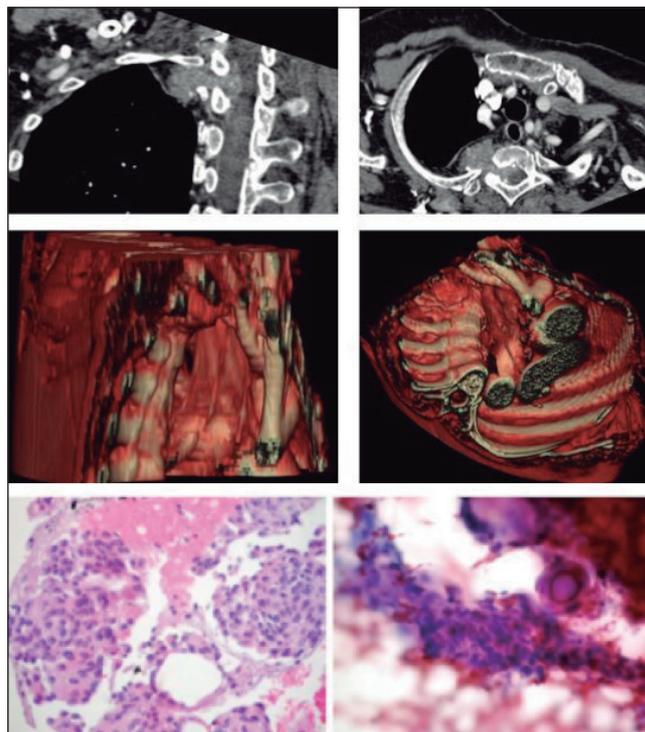


Fig. 1. In top and middle CT pictures a dumbbell-shaped hypervascular lesion (22 x 29 x 21 cm) can be seen, growing through the spinal canal extending into intervertebral foramen, on the right paravertebral region (between D1 and D2). In the images below: An intense immunoreactivity for progesterone receptors was observed in neoplastic cells.

ments, instead by syringe suction. A sufficient amount of material was obtained to establish a meningioma diagnosis (intense immunoreactivity for progesterone receptor; negative expression for TTF-1 and CK AE1/AE3) (at the bottom of Fig. 1) from samples showing medium-sized round cells without nuclear atypia but with pseudoinclusions and psammomas bodies nuclear modifications that formed lobules surrounded by collagenous septa.

A right hemicolectomy was performed following a diagnosis of cecum adenocarcinoma without involvement of the 11 removed nodes or risk factors (pT2, pN0, Mx). No signs of local or distant relapse were observed during a 3-year follow-up period.

Discussion

Although the association between meningioma and colon adenocarcinoma has been described (5), the histopathological confirmation of the dorsal lesion was necessary in this case to most appropriately manage the cecum adenocarcinoma. Spinal meningiomas account for 12 % of all meningiomas and between 25-45 % of intradural spinal tumours (6). Management of spinal meningiomas has been extrapolated from intracranial meningiomas (7). In this case, we dismissed surgery as an option based on the absence of symptoms, patient comorbidity and the high risk of recurrence after surgery.

Since the introduction of EUS-FNA in 1992, its use, beyond the diagnosis of gastrointestinal lesions, has grown superlatively. Thus, due to its accuracy regarding mediastinal nodes, adrenal glands (8) and accessible liver lesions (9) evaluations, EUS-FNA is crucial when management is based on radical surgery. Its usefulness in interventional procedures (neurolysis, drainage of collections, implementation guides and/or radioactive markers) is also growing (10). Despite this plethora of EUS-FNA applications, we have not evidence of previous publications in which a meningioma diagnosis was established by EUS-FNA.

Carmen Reyna¹, Antonio Viúdez¹, María Dolores Lozano², José Echeveste², Ruth Zárate³, Gorka Bastarrika⁴, Jordi Broncano⁴ and José Carlos Subtil⁵

¹Oncology and ²Pathology Departments. *Clínica Universidad de Navarra. Universidad de Navarra. Pamplona, Navarra. Spain.* ³Laboratory of Pharmacogenomics. *Division of Oncology. Centro de Investigación Médica Aplicada (CIMA). Universidad de Navarra. Pamplona, Navarra. Spain.* ⁴Radiology and ⁵Gastroenterology Departments. *Clínica Universidad de Navarra. Universidad de Navarra. Pamplona, Navarra. Spain.*

References

1. Tamm EP, Balachandran A, Bhosale PR, Katz MH, Fleming JB, Lee JH, et al. Imaging of pancreatic adenocarcinoma: Update on staging/resectability. *Radiol Clin North Am* 2012;50:407-28.
2. Vila JJ, Jiménez FJ, Irisarri R, Martínez A, Amorena E, Borda F. Rectal cancer staging with endoscopic ultrasonography: Correlation with pathological staging. *Rev Esp Enferm Dig* 2007;99:132-7.
3. Repiso A, Gómez-Rodríguez R, López-Pardo R, Lombera MM, Romero M, Aranzana A, et al. Usefulness of endoscopic ultrasonography in preoperative gastric cancer staging: Diagnostic yield and therapeutic impact. *Rev Esp Enferm Dig* 2010;102:413-20.
4. Catalano MF, Rosenblatt ML, Chak A, Sivak MV Jr, Scheiman J, Gress F. Endoscopic ultrasound-guided fine needle aspiration in the diagnosis of mediastinal masses of unknown origin. *Am J Gastroenterol* 2002;97:2559-65.
5. Malmer B, Tavelin B, Henriksson R, Grönberg H. Primary brain tumours as second primary: A novel association between meningioma and colorectal cancer. *Int J Cancer* 2000;85:78-81.
6. Helseth A, Mork SJ. Primary intralesional neoplasms in Norway, 1955 to 1986. A population-based survey of 467 patients. *J Neurosurg* 1989;71:842-5.
7. Setzer M, Vatter H, Marquardt G, Seifert V, Vrionis FD. Management of spinal meningiomas: Surgical results and a review of the literature. *Neurosurg Focus* 2007;23:E14.
8. Dumonceau JM, Polkowski M, Larghi A, Vilmann P, Giovannini M, Frossard JL, et al. Indications, results, and clinical impact of endoscopic ultrasound (EUS)-guided sampling in gastroenterology: European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guideline. *Endoscopy* 2011;43:897-912.
9. TenBerge J, Hoffman BJ, Hawes RH, Van Enckevort C, Giovannini M, Erickson RA, et al. EUS-guided fine needle aspiration of the liver: Indications, yield, and safety based on an international survey of 167 cases. *Gastrointest Endosc* 2002;55:859-62.
10. Cho CM, Dewitt J, Al-Haddad M. Echo-endoscopy: new therapeutic frontiers. *Minerva Gastroenterol Dietol* 2011;57:139-58.