Gastric Schwannoma: A Rare Case with Preoperative Diagnosis by EUS-FNB

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Introduction

Schwannomas are benign neurogenic tumors. Gastric schwannomas is the most common digestive tract. It account only for 0.2% of all gastric tumors and principally involve the submucosa and muscularis propria [1]. The preoperative differentiation between gastric schwannomas and gastrointestinal submucosal tumors (GISTs) can be difficult. None of the imaging studies have shown any distinct features unique to these neoplasms [2]. Final diagnosis of gastric schwannomas is made by surgical pathology. Both EUS-guided fine needle aspiration and EUS-guided biopsy (EUS-FNB) can be used for tissue sampling. However only Endoscopic Ultrasound Guided Fine Needle Biopsy (EUS-FNB) allows core biopsy sufficient for histopathologic processing. With the advent of immunohistochemical staining techniques and ultrastructural evaluation, it is now possible to identify these neoplasms based on their distinct immunophenotypes [3].

Herein we report a very rare case of a gastric schwannoma diagnosed preoperatively by EUS-FNB. A 62-year old woman with iron deficiency anemia was referred to endoscopic evaluation. Gastroscopy revealed a 2-cm submucosal antral mass lesion with normal overlying mucosa. A subsequent contrast-enhanced CT scan showed a homogenous mass, measuring 2.2 cm and arising from the antrum of the stomach. EUS was performed. A 2.2 cm subepithelial hypoechoic homogenous mass was shown, originating from the muscularis propria (Figure 1). EUS-FNB with 22G needle (ACQUIRE, Boston Scientific, Natick, MA, USA) was done (Figure 1). The tissue from the tumor was composed of broad bundles of elongated cells (C, H&E stain). In immunohistochemistry (D-H), the tumor strongly stains for S-100 (G) and moderately positive for SOX-10 (H). Staining for CD-117 (D), DOG-1 (E) and smooth muscle desmin (F) are negative.

Figure 1: EUS images (A, B) and pathologic findings (C-H) of EUS-FNB. The tissue was composed of broad bundles of elongated cells (C, H&E stain). In immunohistochemistry (D-H), the tumor strongly stains for S-100 (G) and moderately positive for SOX-10 (H). Staining for CD-117 (D), DOG-1 (E) and smooth muscle desmin (F) are negative.
chunks of spindle neoplastic cells that were immunoreactive with S-100 protein and SOX-10, but lacked immunoreactivity with CD-117, DOG-1, smooth-muscle desmin (Figure 1). The histopathologic features and immunohistochemical staining pattern were consistent with a gastric schwannoma. Due to the difficulty of establishing a definite preoperative diagnosis of gastric schwannoma, surgical resection should be considered in patients with ill-defined subepithelial lesions. In this case, relying on the excellent prognosis for this type of neoplasms, a conservative management was undertaken.

References