DISCUSSION

Glomus tumor is a distinct, benign, and solitary cellular proliferation that arises from modified smooth muscle cells of the glomus body, a type of neuromyoarterial receptor that plays an important role in the regulation of arterial blood flow.[1] The majority of GTs occur in the deep dermis or subcutis of the upper or lower extremity, where arteriovenous anastomoses are numerous.[1] However, they may also develop at sites at which the glomus body may be sparse or even absent, such as bone and joints, skeletal muscle, soft tissue, mediastinum, trachea, kidney, uterus, vagina, and stomach.[1–4] Although the histopathologic features of gastric GT have been well described in the literature, its cytologic features, which may help in a definitive preoperative diagnosis, have rarely been described.[1–5] We report a case of gastric GT diagnosed by EUS-FNA supported by cell block IHC, and later confirmed on ESMR. Because they are derived from modified smooth muscle cells, GTs, regardless of the anatomic location exhibit a smooth muscle cell phenotype.[2–4] Conservative local resection is usually the optimal therapy for gastric GT.[2–5] However, because of the intramural location, which precludes an endoscopic biopsy diagnosis, and the lack of specific clinical or radiologic features to distinguish them from other intramural masses, GTs are commonly diagnosed histologically after either an endoscopic submucosal or radical resection. FNA cytology obtained by EUS can be used for preoperative diagnosis to distinguish GTs from more aggressive gastric tumors, sparing the patient an extensive surgical resection.

DeBusscher[6] demonstrated the presence of glomus bodies in the submucosa and subserosa of the stomach, mainly along the lesser curvature and the posterior wall near the cardia, explaining the selective occurrence of GT in the stomach. Vinette-Leduc and Yazdi[2] reported a gastric GT that was misinterpreted on percutaneous FNA as a well-differentiated neuroendocrine neoplasm, and correctly identified on the resection specimen. Gu et al[3] and Debol et al[4] each described one case of GT in the stomach diagnosed by cytology and later confirmed by resection.

The differential diagnoses commonly considered for a gastric submucosal mass include those considered in our case, and ectopic pancreatic tissue and lipoma. LGNET and paraganglioma show an admixture of single dispersed and loosely cohesive clusters of monotonous, round to polygonal cells with scant to moderate amount of cytoplasm, round to oval nuclei with finely granular ‘salt-and-pepper chromatin’ and inconspicuous nucleoli. Neuroendocrine markers are positive in both of these lesions and sustentacular cells of paraganglioma are S100 positive. An epithelioid GIST shows loosely cohesive groups and dissociated round to oval cells with irregular nuclear contour, coarsely granular or clumped chromatin, prominent nucleoli, and moderate to abundant amount of eosinophilic cytoplasm. PDCA, HPC, and PEComa may show cytomorphologic resemblance to GT; however, panCK is positive in PDCA, CD34 in HPC, and myogenic and melanocytic markers