Transoral endoscopic ultrasound-guided fine-needle biopsy of a tumor of the parapharyngeal space

The parapharyngeal space is a pyramid-shaped space located between the base of the skull and the hyoid bone, lateral to the naso-oropharynx and medial to the jaw [1, 2]. It contains the deep lobe of the parotid gland, cranial nerves IX–XII, the internal jugular vein, and the carotid artery [1]. A variety of benign and malignant tumors arise in the parapharyngeal space, the most common being salivary gland and neurogenic origin [1]. Because of its deep location and concerns about damaging adjacent structures, the parapharyngeal space is difficult to access for biopsy [1–3]. Percutaneous, transoral, or transnasal approaches have been used; however, sampling may be challenging even under imaging guidance [2–5]. Here we report for the first time a technique of transoral biopsy using a flexible gastrointestinal echoendoscope.

A 41-year-old man with a remote history of mucoepidermoid carcinoma of the left parotid gland presented with a tumor of the right parapharyngeal space (Fig. 1). A multidisciplinary tumor board recommended biopsy; however, this was deemed difficult due to the tumor location. After discussion with a gastroenterologist experienced in endoscopic ultrasound (EUS), a decision was made for biopsy under EUS guidance.

With the patient in the left lateral position and under intravenous sedation, a flexible echoendoscope (Olympus GF-UCT180) was introduced in a standard manner into the oral cavity and torqued clockwise. After passing the palatopharyngeal fold, the EUS transducer was gently wedged against the right lateral wall of the pharynx (Fig. 2). In this position the tumor was easily identified on the EUS image. Three passes with a 22-gauge Acquire needle (Boston Scientific) were performed (Fig. 3, Video 1). The specimen was processed for histological evaluation, which revealed pleomorphic adenoma (Fig. 4). The patient was discharged 48 h later after an uneventful course. The tumor was resected 4 weeks later. Surgical pathology confirmed the diagnosis of pleomorphic adenoma of the deep lobe of the right parotid gland.
Competing interests

The authors declare that they have no conflict of interest.

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