Fine-needle aspiration of a retropharyngeal lymph node guided by endoscopic ultrasonography

Recently, we developed a novel, minimally invasive technique – endoscopic ultrasonography-guided fine-needle aspiration (EUS-FNA) via the nasopharynx – to obtain tissue samples from a retropharyngeal lymph node (RPLN) in a patient with suspected recurrence of nasopharyngeal carcinoma [1]. A schematic diagram of EUS-FNA of an RPLN is shown in Fig. 1a. In April 2015, a 50-year-old man who had received chemoradiotherapy for nasopharyngeal carcinoma 2 years earlier was admitted to the Sun Yat-sen University Cancer Center. Magnetic resonance imaging displayed an enlarged RPLN on the right side, 2.0×1.6cm in size and with central enhancement on T1-weighted contrast-enhanced imaging (Fig. 1b) [2]. Nasopharyngoscopy revealed nasopharyngeal mucosal roughness and local scarring on the right (Fig. 1c). Multiple mucosal biopsy specimens were negative for cancer cells. After a multidisciplinary consultation, the patient was advised to undergo EUS-FNA. An EUS instrument (BF-UC 260F-OL8; Olympus, Tokyo, Japan) was introduced via the right nostril and nasopharynx to scan the retropharyngeal space. Ultrasonography revealed an enlarged RPLN with an axial diameter of 2.0cm on the right side of the retropharyngeal space. The RPLN was close to the carotid sheath, which contained the internal carotid artery (ICA) and internal jugular vein (IGV). The EUS needle penetrated the RPLN while visualized and monitored by real-time EUS, and biopsy tissue was obtained by EUS-FNA. A squamous cell carcinoma nest was visualized in a biopsy specimen from the retropharyngeal lymph node. Consequently, recurrence of nasopharyngeal carcinoma is confirmed.
was repeated three times and lasted for a total of approximately 20 minutes [4]. The procedure of EUS-FNA of an RPLN is shown in Video 1.

The EUS-FNA procedure was conducted smoothly without any severe complication, such as bleeding, subcutaneous emphysema, choking, dyspnea, extremity paralysis, or hemiplegia. The pathological result confirmed the presence of squamous cell metastases in the RPLN (Fig. 1f) [5].

Competing interests: None