

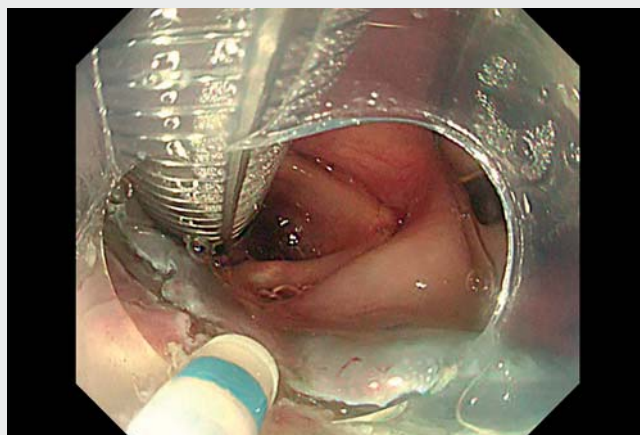
Pharyngeal endoscopic submucosal dissection for a pyriform sinus lesion extending beyond the arytenoid to the vocal folds



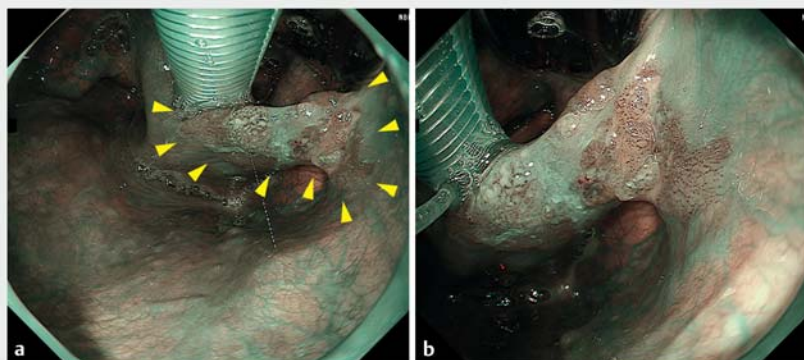
Endoscopic submucosal dissection (ESD) is an effective, minimally invasive treatment for superficial pharyngeal cancer (SPC) [1]. However, some cases of pharyngeal ESD are technically difficult because of the complex anatomical features and interference by equipment such as intubation tubes and the laryngoscope. Here, we report a challenging case of pharyngeal ESD for an SPC extending to the vocal folds (► **Video 1**).

An 80-year-old man diagnosed with advanced esophagogastric junction (EGJ) cancer and SPC on the right pyriform sinus was referred to our hospital. Chemotherapy was initiated for treatment of the EGJ lesion and the SPC remained under surveillance. The EGJ lesion was well controlled with chemotherapy for more than 3 years but the pharyngeal lesion increased in size. Therefore, pharyngeal ESD was planned, as any further increase in size may have rendered the lesion untreatable by endoscopic therapy.

The 25-mm pharyngeal lesion on the right pyriform sinus extended beyond the arytenoid and aryepiglottic fold to the vocal folds. The edge of the lesion on the side of the vocal folds could not be observed (► **Fig. 1**). Placement of a soft hood (Space Adjuster; TOP Corporation, Tokyo, Japan) on the endoscope enabled us to observe the edge of the lesion on the vocal folds side and to perform the ESD procedure on the side of the vocal folds [2] (► **Fig. 2**). After circumferential incision, a ring-shaped thread was applied to provide countertraction [3]. Subepithelial dissection around the right arytenoid was technically difficult because the dissecting layer could not be clearly observed due to fibrosis and rich fatty tissue. We performed dissection carefully with countertraction, and en bloc resection was achieved without adverse events (► **Fig. 3**). Histological examination revealed subepithelial invasive squamous cell carcinoma with negative margins (► **Fig. 4**).



► **Video 1** Pharyngeal endoscopic submucosal dissection of a superficial pharyngeal cancer located on the right pyriform sinus that extended beyond the arytenoid and the aryepiglottic fold to the vocal folds side.



► **Fig. 1** Endoscopic view of a 25-mm lesion on the right pyriform sinus. **a** Distant view of the lesion (arrowheads). **b** Close view of the lesion. The lesion extended to the side of the vocal folds beyond the arytenoid and the aryepiglottic fold; thus, the edge of the lesion could not be observed.

The patient was extubated immediately after ESD, and was administered intravenous hydrocortisone sodium succinate (50–100 mg/day) for 5 days. He was discharged from hospital 6 days after ESD without adverse events including laryngopharyngeal edema.

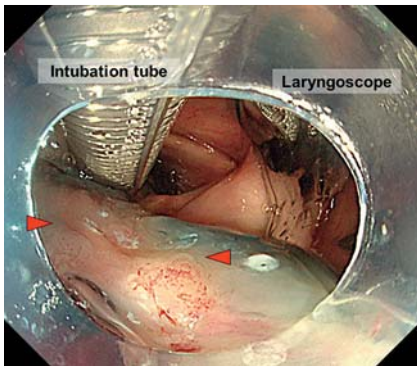
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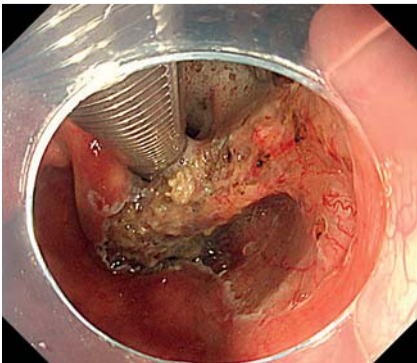
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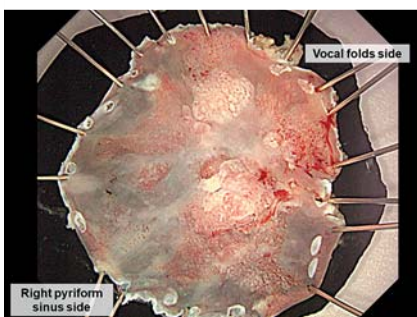
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► **Fig. 2** Endoscopic image that was obtained after creating markings using the DualKnife J (KD-655Q; Olympus, Tokyo, Japan) and after subepithelial injection of a mixed solution of sodium hyaluronate and saline. Placement of a soft hood (Space Adjuster; TOP Corporation, Tokyo, Japan) on the endoscope enabled us to observe the edge of the lesion on the vocal folds side (arrowheads) and perform the procedure on the side of the vocal folds.



► **Fig. 3** Endoscopic image of the defect after endoscopic submucosal dissection.



► **Fig. 4** Macroscopic appearance of the resected specimen. Histological examination revealed a squamous cell carcinoma 1.7 mm thick; the invasion depth of the subepithelial layer was 500 μ m, with negative margins.

Competing interests

The authors declare that they have no conflict of interest.

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