

## Cervicothoracoscopic Approach in Esophagectomy

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### ABSTRACT

**Backgrounds.** Esophageal cancer frequently metastasizes to lymph nodes along the recurrent laryngeal nerve (RLN).<sup>1</sup> Therefore, it is essential to dissect RLN nodes for curative esophagectomy. Complete RLN node dissection without injury to the organs at the cervicothoracic junction requires experienced techniques. This report describes the cervicothoracoscopic approach, whereby the complete dissection can be safely performed.

**Methods.** With this approach, both cervical and laparoscopic procedures are performed in the open-leg supine position before the thoracoscopic procedure is performed in the prone position. For RLN node dissection, the paratracheal lymphatic chain is detached from RLNs at the cervicothoracic junction in the cervical operation field, and the detached tissue is retrieved together with the mediastinal RLN lymph nodes via thoracoscopy. This approach was applied to all squamous cell carcinoma patients and to patients with Siewert type 1 tumors of stage 2 or more, except for patients with clinically suspected T4 tumors.

**Results.** Of 91 patients, 27 (29.7%) experienced RLN palsy and 15 (16.5%) experienced postoperative

pneumonia. Hoarseness due to RLN palsy was improved in almost all the patients within 6 postoperative months, and persistent paralysis was seldom observed. Within 30 days, neither a reoperation nor a hospital mortality occurred.

**Conclusions.** The cervicothoracoscopic approach enables complete en bloc dissection of the lymphatic chain that lies along RLN in the cervicothoracic junction. Also, with this approach, RLNs can be identified easily because RLNs are already exposed at the upper mediastinum by the cervical procedure. Therefore, this approach may contribute to improving the surgical curability and preventing RLN injury.

**DISCLOSURE** There are no conflict of interest.

### REFERENCE

1. Matsubara T, Ueda M, Abe T, Akimori T, Kokudo N, Takahashi T. Unique distribution patterns of metastatic lymph nodes in patients with superficial carcinoma of the thoracic oesophagus. *Br J Surg.* 1999;86:669–73.

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