Cervicothoracoscopic Approach for Esophageal Cancer in a Patient with Right-Sided Aortic Arch

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ABSTRACT

Background. Esophageal cancer frequently metastasizes to lymph nodes along the recurrent laryngeal nerve (RLN),¹ therefore it is essential to dissect RLN nodes for curative esophagectomy.² Right-sided aortic arch (RAA), a rare congenital anomaly, occurs in approximately 0.1% of adults.³ Because RAA forms a vascular ring encircling both the esophagus and the trachea at the cervicothoracic junction, its surgical anatomy is difficult to understand; hence, thoracoscopic dissection of RLN nodes is technically challenging. In this video, we applied the cervicothoracoscopic approach in a patient with esophageal squamous cell carcinoma and RAA, wherein the cervical operation was performed prior to the thoracoscopic operation.⁴

Methods. A 60-year-old woman was diagnosed with stage IA esophageal squamous cell carcinoma. During preoperative evaluation, we found that she had RAA with an aberrant left subclavian artery, and therefore decided to perform esophagectomy using the cervicothoracoscopic approach. In the cervical operation, we identified the RLN and dissected the lymph node in the cervicothoracic junction. The thoracoscopic operation was then performed from the left side with the patient in the prone position.

Results. The operation was successful. Total operative time was 548 min, with an estimated blood loss of 220 ml. There were no intraoperative and postoperative complications, and RLN palsy did not occur.

Conclusions. The vascular ring at the cervicothoracic junction in a patient with RAA made it difficult to dissect the RLN lymph nodes during oncologic esophagectomy. The cervicothoracoscopic approach enables the complete dissection of these lymph nodes and is a useful esophagectomy technique for patients with RAA.

DISCLOSURES Akihiko Okamura, Masayuki Watanabe, Masami Yuda, Yoshiaki Shoji, Kotaro Yamashita, Masaru Hayami, Yu Imamura, and Shinji Mine declare no conflicts of interest.

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