

Two Cases of Non-recurrent Inferior Laryngeal Nerve

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Although the presence of a non-recurrent inferior laryngeal nerve (NRILN) is rare, surgeons occasionally encounter this anomaly during thyroid and parathyroid surgery. It is usually due to anomalous nerve and blood vessel development from the embryonic branchial arches.

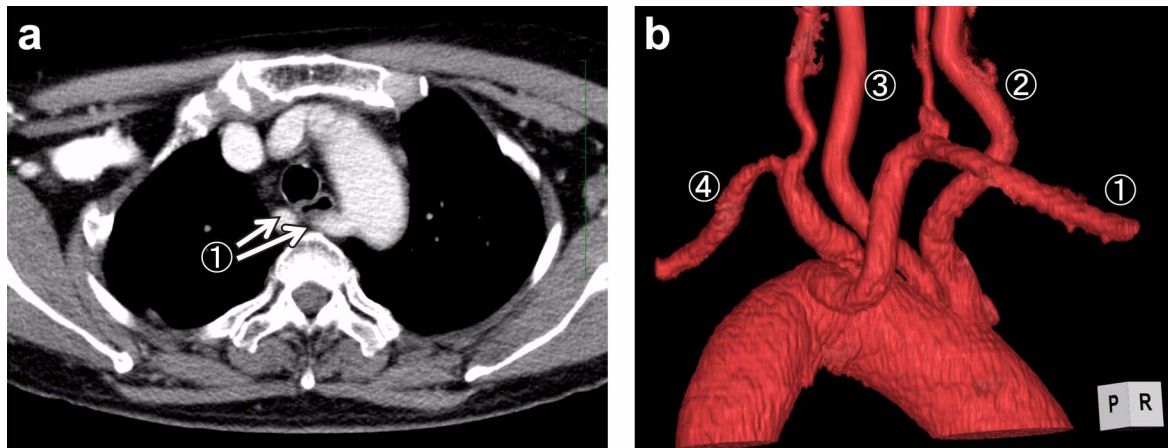
We recently encountered two patients with NRILN. One represented type 1 branching from the vagus trunk at the level of the inferior thyroid artery, and the other, type 2 branching at the level of the superior pole of the thyroid gland.

Avoiding injury to the inferior laryngeal nerve is a major consideration during thyroid and parathyroid surgery. Because in most cases, including our two cases, NRILNs are associated with anomalous origin of the right subclavian artery from the aortic arch, this anomaly can be predicted by imaging procedures. Therefore, surgeons must pay careful attention to the preoperative examination findings in order to reduce the risk of injury of this nerve.

Keywords : non-recurrent inferior laryngeal nerve, thyroid surgery, aberrant right subclavian artery

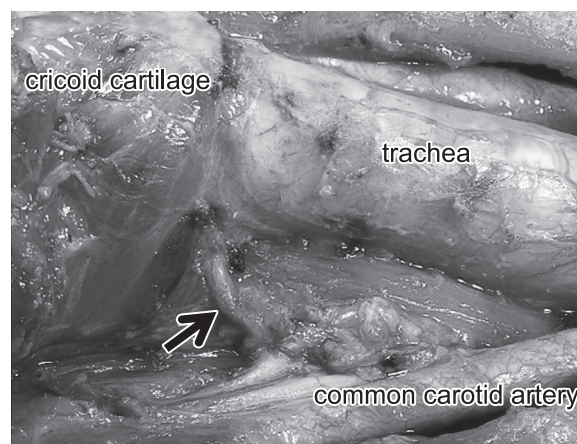
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a: The axial CT image of Case 1 showing the right subclavian artery (1) running dorsal to the trachea and the esophagus.

b: The reconstructed CT image of the vascular system viewed from the dorsal side. Note that the right subclavian artery (1) branches directly from the aortic arch peripheral to the right common carotid artery (2), the left common carotid artery (3), and the left subclavian artery (4).



The intraoperative findings of Case 2

The arrow indicates the right non-recurrent inferior laryngeal nerve.