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PHOTO ESSAY

Rare anomaly of recurrent laryngeal nerve

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SPECIAL FEATURE

Aberrant findings beckon in the path of a surgeon

The recurrent laryngeal nerve arises from the vagus and supplies all the intrinsic muscles of the larynx except the cricothyroid muscle.

It has an indirect course through the neck, branching off from the vagus nerve:

RIGHT RLN

Branches from the vagus nerve around the level of the T1–T2 loop under the right subclavian artery and travel posteriorly. It then moves back up through the neck. It initially traverses at an angle towards the tracheoesophageal groove (TEG) and then runs parallel to it.

LEFT RLN

Arises anteriorly at the level of the arch of the aorta, loops posteriorly under the aortic arch, and back up through the neck. It travels in a course that is parallel and close to the TEG.

The RLN's course is important because injury to the RLN can impair vocal function. The left RLN is more vulnerable to injury than the right RLN because of its lower origin and longer course.

NONRECURRENT LARYNGEAL NERVE: NRLN

In about 2% individuals, NRLN may be encountered, more on the right side (80%–90%).

NRLN Rt. Side: it is explained on the basis of embryological development due to partial regression of the 4th pharyngeal arch, which creates an aberrant subclavian artery that runs behind the esophagus. During embryonic development, the RLN normally recurs around the 6th aortic arch.

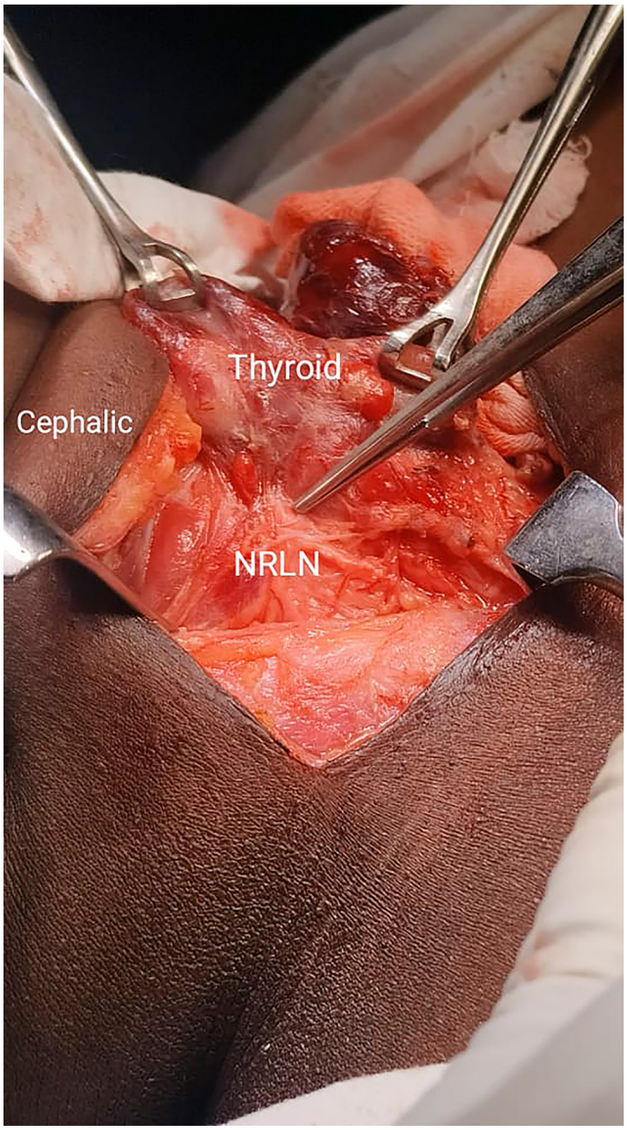

Figure 1: Intraoperative picture. NRLN: Non-recurrent laryngeal nerve.

In NRLN, the nerve instead passes directly from the vagus nerve to the larynx by passing the aortic arch. There are two types.

- Type 1. NRLN—Arising from the vagus nerve passing posterior to the superior thyroid artery.
- Type 2. NRLN—Arising from the vagus nerve passing anterior to the superior thyroid artery.

A cautious dissection can identify the NRLN.

A right-sided nonrecurrent laryngeal nerve was identified in a 24-year-old female with papillary carcinoma thyroid (T1M0N0) posted for total thyroidectomy with central neck node dissection.

Dr. Samanth Kumar, from Department of Surgical Oncology, Rangaraya Medical College, Kakinada, India, reported two instances over a span of 2 months. The below intraoperative picture [Figure 1] shows one of the cases.

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