Answer

Right-Sided Inferior Nonrecurrent Laryngeal Nerve

A right-sided inferior nonrecurrent laryngeal nerve is an uncommon anomaly found in 0.3% to 1.6% of the population.[1] The anomaly results from abnormal embryonic development of the aortic arches. When the right fourth arch is absent, the innominate artery is absent. The right subclavian artery runs an aberrant course, originating from the aortic arch, distal to the left subclavian artery, and traversing midline behind the esophagus and is termed an *arteria lusoria.* The absent innominate artery with aberrant right subclavian artery is the most common anomaly of the aortic arch, occurring in 0.4% to 1.8% of the population.[2,3] During embryonic lengthening of the neck, the nerve branch is not attached at the level of the thorax and migrates upward, arising directly from the vagus nerve in the cervical region.[1,2,4-6]

The best way to identify a nonrecurrent laryngeal nerve is systematic location and dissection of the nerve intraoperatively.[2] Early visualization of the nerve as it perpendicularly divides from the vagus nerve will eliminate a lengthy dissection within the tracheoesophageal groove.[3] Once a patient has been diagnosed as having this abnormality, further evaluation is useful to identify potential causes of dysphagia, secondary to tracheal and/or esophageal compression and possible aneurysm.[2,3] A barium swallow test may demonstrate a notch on the posterior wall of the esophagus.[2] Arteriography and contrast-enhanced computed tomography, magnetic resonance angiogram, and/or duplex ultrasonography may be used to identify the absence of the right subclavian artery.[4]

This patient underwent successful thyroidectomy, with great care to preserve the nonrecurrent laryngeal nerve. She had no voice changes after surgery.

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