Intraoperative Finding of Non-recurrent Inferior Laryngeal Nerve During Papillary Thyroid Carcinoma Surgery

Hallazgo intraoperatorio, de nervio laringeo inferior no recurrente, durante intervención por carcinoma papilar de tiroides

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A 40-year-old woman presented with neck pain and dysphagia. The patient presented a grade 1 goiter with no palpable adenopathies. Ultrasound reported a multinodular goiter with a dominant nodule of 1.1 cm in the right thyroid lobe. The patient was diagnosed with papillary thyroid carcinoma by FNAC.

The patient was operated and a 2 cm nodule was found in the right thyroid nodule and right paratracheal adenopathies of malignant appearance. Total thyroidectomy and central lymphadenectomy were performed respecting the 4 parathyroid glands, the left inferior recurrent laryngeal nerve and the right inferior non-recurrent laryngeal nerve (Fig. 1).

The patient presented transitory hypocalcaemia in the post-operative period with no dysphonia. The definitive study reported papillary thyroid carcinoma and metastasis in 7 of the 19 lymph nodes. She currently has no signs of recurrence.

Injury to the recurrent nerve during cervical surgery is the most common iatrogenic cause of vocal cord paralysis (between 0.25%–2.6% of surgical interventions and 8% of reoperations), therefore if it is identified, the incidence of this complication is reduced.

Non-recurrent nerve is a very rare anatomic variation of the inferior laryngeal nerve (≤1%), which is a consequence of an embryonic vascular condition known as arteria lusoria (between 0.5%–2% of the general population).

It has been established that identifying the nerve along its entire route, with systematic dissection, results in less risk of injury. If the presence of a non-recurrent nerve is not known, injury is more likely, therefore awareness of its existence and the correct surgical technique will prevent accidental injury to the nerve during cervical surgery.
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