

Endoscopic right thyroid lobectomy

Endocrine surgery is well defined by C. Proye: "Attention à ce que vous enlevez, mais attention plus encore à ce que vous laissez" [3]!

Thus, in order to maximize the benefit from image magnification in the identification of the inferior laryngeal and parathyroid glands, we have successfully attempted a new endoscopic approach to thyroid surgery.

A 30-year-old woman, operated 3 months previously for a malignant endocrine neoplasm of the body of the pancreas, was admitted with a 4-mm hypoechogenic nodule of the right thyroid lobe. Thyroid hormone values were normal; fine-needle aspiration biopsy was compatible with adenoma. Other investigations for multiple endocrine neoplasm I were negative. The patient underwent endoscopic right thyroid lobectomy on 8 July 1996. The lateral approach according to J. Marescaux's open technique was employed [2]. Three laparoscopic trocars were inserted under the platysma muscle at the anterior margin of the sternomastoid muscle: at the jugular notch (5 mm), at the angle of the mandible (5 mm), and midway between the other two, approximately 4 cm above the clavicle. A 30° endoscope was used. Carbon dioxide was insufflated at low pressure to create a space for the dissection. The medial margin of the sternocleidomastoid was dissected and the muscle was retracted laterally with external stitches. The inferior thyroid artery and inferior laryngeal nerve were easily visualized and dissected. The arm of a wall-lifter (Laparo Tenser, CHIO-MED s.r.l., Treviglio, Bergamo, Italy) was inserted through the jugular trocar to enhance the exposure without excessive CO₂ insufflation. The strap muscles were divided with bipolar coagulation; the upper pole of the gland was freed and the external branch of the superior laryngeal nerve was identified and preserved. The superior and inferior thyroid vessels were clipped and divided. The two parathyroid glands were visualized and preserved. The inferior laryngeal nerve was dissected with an ultrasound dissector (Harmonic Scalpel, UltraCision, Smithfield, USA). The nerve was followed for all its cervical course up to the inferior constrictor of the pharynx. With the same instrument, small perineural vessels were divided and the gland was freed from its posterior attachments. Finally, section of the isthmus was performed with the bipolar coagulator. The specimen, measuring 3 cm by 2 cm, was inserted in a plastic bag (Endopouch, Ethicon Endo Surgery, USA) and extracted through the 10-

mm access. A suction drain was left in place and removed after 12 h. The procedure took 4 h and 45 min; blood loss was virtually nil. There were no intraoperative complications, and specifically no hypercarbia. The patient was ambulant on the same night of the operation. She had a normal voice and could drink sips of water. She didn't need analgesic medication. Surgical enfisema could be felt in the subcutaneous tissue limited to the neck, causing little or no discomfort. In this respect our experience differs from that described by Gagner following endoscopic parathyroidectomy [1]. We believe this is explained by the combined use of a wall lifter with low-pressure CO₂ insufflation. The absence of hypercarbia can also be explained in this way. The patient was discharged home on the 2nd postoperative day. The cosmetic result was very satisfactory. Pathological examination showed the presence of a 3-mm papillary microcarcinoma, moderately differentiated with focal invasion of the capsule.

Thyroid endoscopic approach is feasible, with adherence to the rules of endocrine surgery and with very good cosmetic result. Image magnification permits an excellent view of nervous and vascular structures and parathyroid glands. The difficulties encountered were due to the excessive length of instruments designed for laparoscopic surgery: the availability of shorter and more ergonomic instruments should facilitate the procedure.

References

1. Gagner M (1996) Endoscopic subtotal parathyroidectomy in patients with primary hyperparathyroidism. *Br J Surg* 83: 875
2. Marescaux J (1991) Thyroïde. In: Proye C, Dubost C, et al. (eds) *Endocrinologie chirurgicale*. Medsi/McGraw Hill, Paris, pp 13–53
3. Proye C (1991) Principes généraux de traitement en chirurgie endocrinienne. In: Proye C, Dubost C, et al. (eds) *Endocrinologie chirurgicale*. Medsi/McGraw Hill, Paris, pp 1–11

C. S. G. Hüscher

S. Chiodini

C. Napolitano

A. Recher

Department of General Surgery
Vallecamonica Hospital
25040 Esine (BS)
Italy