—Photogravure—

Cosmetic Benefits of the Central Approach with Video-assisted Neck Surgery in Graves' Disease

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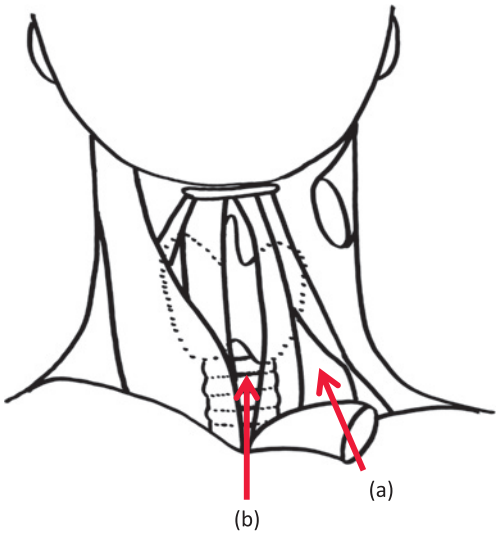

Fig. 1

We developed video-assisted neck surgery (VANS) for the treatment of thyroid and parathyroid tumors in March 1998[1,2]. Over the past decade, we have treated more than 500 patients with thyroid adenoma, parathyroid adenoma, papillary carcinoma, or Graves' disease.

Because Graves' disease has a predilection for young and female patients, we believe VANS is a suitable method for the surgical treatment of Graves' disease. In the surgical therapy of Graves' disease with VANS, as compared with the other conventional thyroid surgeries, it is more important to secure a clear surgical visual field and sufficient surgical working space. Therefore, we limited the surgical indications for Graves' disease with VANS to a thyroid gland weight of less than 60 g, estimated with palpation.

We perform subtotal thyroidectomy and leave less than 2 g of the thyroid gland to maintain thyroid hormone levels in either the hypothyroid or euthyroid state and to avoid the risk of the recurrent hyperthyroid state.

We have treated more than 25 cases of Graves' disease with VANS since September 2002. For the benefits of obtaining a clear surgical visual field and good cosmetic results, we have changed the approach to the thyroid gland from the lateral **(Fig. 1 (a))** to the center **(Fig. 1 (b))**. With the center approach the sternohyoid and sternothyroid muscles are separated in the midline, and the anterior surface of the thyroid gland is exposed **(Fig. 1 (b))**. With the lateral approach the thyroid gland is reached via a route between the anterior border of the sternocleidomastoid and the strap muscles of the neck **(Fig. 1 (a))**. Postoperative photographs of the center

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Fig. 2

Fig. 3

approach and the former lateral side approach with VANS show that the anterior cervical muscles are retained symmetrically with the center approach **(Fig. 2)** but that asymmetrical omohyoid muscle atrophy occurs with the lateral approach **(Fig. 3)**.

We believe that the center approach with VANS for Graves' disease is feasible, safe, and practical and has cosmetic benefits.

Fig. 1 The illustration shows the differences of the approaches to the thyroid gland.
The left sternocleidomastoid muscle has been cut and reflected.
The red arrow line (a) shows the approach from the lateral side.
The red arrow line (b) shows the approach from the center.

Fig. 2 The anterior cervical muscles were retained symmetrically with the center approach.

Fig. 3 The anterior cervical muscles are asymmetrical because of atrophy of the omohyoid muscle with the lateral side approach.

References

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