Endoscopic Thyroidectomy via breast, axillary approach

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Background

- The first laparoscopic cholecystectomy was done in 1987 by Dr Phillipe Mouret
- Cervical surgery by endoscopy: performed in 1996 for a case of hyperparathyroidism: Dr Gagner
- Lobectomy of thyroid: in 1997 by Dr Hucher
- The most of endoscopic thyroidectomy were undergone in Italy, Korea and Japan
- Lobectomy of thyroid is the main of procedures
- In Vietnam: endoscopic thyroidectomy, the first time, was performed at National Hospital of Endocrinology
The approach

- The cervical approach
- The breast approach
- The breast-axillary approach
The approach

- Breast approach

Skin incision was 3cm, 0.7cm, 0.7cm each.

The approach

- The breast- axillary approaches
The approaches

Making of working space

- Skin lifting system
- CO2 insufflation
Making of working space

- Skin lifting system

Fig. 1. Creating a working space. (a) A 3 cm skin incision is made 2 cm below the right clavicle; (b, c) two Kirshner steel wires are inserted at the upper and lower level of the thyroid gland; (d) puncture point of specially-made retractor (retractor being drawn out).

Fig. 1. Operative views during VANS (subtotal thyroidectomy).
Making of working space

- Skin dissection (Japanese Doctor) - ELSA2008

Making of working space

- CO2 insufflation (Japanese Doctor) - ELSA2008
Technique

- Exposure of Thyroid gland (Japanese Doctor-ELSA2008)
Technique

- Exposure of Thyroid gland

Dr Luong’s Technique

- Approach: breast- axillary approach
- Making of working space: CO2 insufflation
- Exposure the thyroid by dissecting of the muscles from lateralline
- Control all of thyroid vessels by Harmonic Scalpel
Technique
Breast- axillary approach

Operative field
Anatomy and Surgery

Superior pole

Parathyroid

Recurrent nerve
Anatomy and Surgery

Access to expose the thyroid

Mid line    Lateral line
Access to expose the thyroid

Mid line

Lateral line

Access to the thyroid

[Diagram of thyroid access]
Access to the thyroid

Access to the thyroid
Indications

- Lobectomy
  - Nodular goiter
  - Multinodular goiter
  - Adenoma
  - Papillary carcinoma in 1 lobe (low risk)
- Subtotal Thyroidectomy
  - Multinodular goiter located in the pole

Indications

- Near totalthyroidectomy with remnant of the posterior wall: for Grave’s disease
- Totalthyroidectomy
  - Multinodular goiter
  - Grave’s disease: with nodules, severe ophtalmopathy, allergic to antithyroid medication
  - Most of the PTC, FTC and medullary carcinoma
- Totalthyroidectomy + modified lateral and central compartment dissections: thyroid carcinoma + metastase or non- metastase
The preoperative explorations

- Exploration of thyroid function: in euthyroid state
- Imaging explorations of thyroid: echography, CT scanner
- Cystology: FNA
- ENT examination: vocal cord by laryngoscopy for carcinoma, reoperation
- For Grave’s disease: preoperative preparation by drinking of Lugol 1% solution

Remarks

- The advantages of lateral line dissection:
  - The thyroid is exposed very well
  - The superior pole is controlled very easily
  - Keep intact easily the parathyroid and recurrent nerve
- Sternal notch is the first landmark and then to identify the midline, ipsilateral SCM muscle
- The SCM muscle is the second landmark, the omo-hyoid muscle is third landmark
- Avascular space is very important: have to come in to avoid the damage of recurrent nerve and parathyroid gland
Remarks

- The working space is small so that the hemostasis will be very difficult: to have the good knowledge of anatomy.
- The principle: to dissect and to control the vessels as adjacently as possible to the thyroid gland.
- Have to avoid the perforation or the rupture of nodule: bleeding.
- The surgeons have to understand the anatomy, have the experiences of open thyroidectomy and have the knowledge of laparoscopic surgery.

Images

Left lobectomy
Axillary approach
The endoscopic thyroidectomy is safely, effectively procedure in maximal cosmetic benefits and can been indicated for different thyroid diseases.
Thank you