TERAPIA CHIRURGICA DEI NODULI TIROIDEI: INDICAZIONI E MODALITA’

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Terapia dei noduli tiroidei

• Terapia medica con levotiroxina

• Trattamento con tionamidi/radioiodio/ablazione laser

• Terapia chirurgica
Indicazioni alla chirurgia tiroidea

- Gozzo nodulare con fenomeni compressivi
- Gozzo diffuso voluminoso
- Gozzo tossico non trattabile con terapia conservativa (farmaci, radioiodio)
- Noduli citologicamente maligni o sospetti per malignità
RECOMMENDATION 27

A) Surgery may be considered for growing nodules that are benign after repeat FNA if they are large (> 4 cm), causing compressive or structural symptoms, or based upon clinical concern. (Weak recommendation, Low-quality evidence)

B) Patients with growing nodules that are benign after FNA should be regularly monitored. Most asymptomatic nodules demonstrating modest growth should be followed without intervention. (Strong recommendation, Low-quality evidence)

RECOMMENDATION 28

Recurrent cystic thyroid nodules with benign cytology should be considered for surgical removal or percutaneous ethanol injection (PEI) based on compressive symptoms and cosmetic concerns. Asymptomatic cystic nodules may be followed conservatively. (Weak recommendation, Low-quality evidence)
7.2.3. Surgical indications for benign nodules

- Consider surgery when local pressure symptoms are present and clearly associated with the nodule(s) or in the case of appearance of suspicious US features, despite benign FNA findings [BEL 2, GRADE B].
RECOMMENDATION 10

A) For a nodule with an initial non-diagnostic cytology result, FNA should be repeated with US guidance and, if available, on-site cytologic evaluation (Strong recommendation, Moderate-quality evidence)

B) Repeatedly non-diagnostic nodules without a high suspicion sonographic pattern require close observation or surgical excision for histopathologic diagnosis (Weak recommendation, Low-quality evidence)

C) Surgery should be considered for histopathologic diagnosis if the cytologically non-diagnostic nodule has a high suspicion sonographic pattern, growth of the nodule (greater than 20% in two dimensions) is detected during ultrasound surveillance, or clinical risk factors for malignancy are present (Weak recommendation, Low-quality evidence)
RECOMMENDATION 15

(A) For nodules with AUS/FLUS cytology, after consideration of worrisome clinical and sonographic features, investigations such as repeat FNA or molecular testing may be used to supplement malignancy risk assessment in lieu of proceeding directly with a strategy of either surveillance or diagnostic surgery. Informed patient preference and feasibility should be considered in clinical decision-making. (Weak recommendation, Moderate-quality evidence)

(B) If repeat FNA cytology and/or molecular testing are not performed or inconclusive, either surveillance or diagnostic surgical excision may be performed for an AUS/FLUS thyroid nodule, depending on clinical risk factors, sonographic pattern, and patient preference. (Strong recommendation, Low-quality evidence)
RECOMMENDATION 16

(A) Diagnostic surgical excision is the long-established standard of care for the management of follicular neoplasm/suspicious for follicular neoplasm (FN/SFN) cytology nodules. However, after consideration of clinical and sonographic features, molecular testing may be used to supplement malignancy risk assessment data, in lieu of proceeding directly with surgery. Informed patient preference and feasibility should be considered in clinical decisionmaking. (Weak recommendation, Moderate-quality evidence)

(B) If molecular testing is either not performed or inconclusive, surgical excision may be considered for removal and definitive diagnosis of an FN/SFN thyroid nodule. (Strong recommendation, Low-quality evidence)
RECOMMENDATION 17

(A) If the cytology is reported as suspicious for papillary carcinoma (SUSP), surgical management should be similar to that of malignant cytology, depending on clinical risk factors, sonographic features, patient preference, and possibly results of mutational testing (if performed). (Strong recommendation, Low-quality evidence)

(B) After consideration of clinical and sonographic features, mutational testing for BRAF or the 7-gene mutation marker panel (BRAF, RAS, RET/PTC, PAX8/PPARγ) may be considered in nodules with SUSP cytology if such data would be expected to alter surgical decision-making. (Weak recommendation, Moderate-quality evidence)

RECOMMENDATION 12

If a cytology result is diagnostic for primary thyroid malignancy, surgery is generally recommended. (Strong recommendation, Moderate-quality evidence)
Fig. 3. Cytologic categories and suggested clinical actions. AUS/FLUS indicates follicular lesion/ataxia of undetermined significance. FNA = fine-needle aspiration; TIR = Thyroid Imaging Reporting; Thy = thyroid; US = ultrasonography.
Tattica chirurgica

Abbandonati ormai da anni interventi intracapsulari quali:

- Enucleazioni od enucleoresezioni
- Lobectomie parziali e/o subtotali
- Tiroidectomie “quasi totali” o “near total”

Oggi gli interventi proposti per una corretta tiroidectomia consistono nella quasi totalità dei casi in:

- ✔ Tiroidectomia totale extracapsulare
- ✔ Loboistmectomia
Tiroidectomia extracapsulare

ASPORTAZIONE “IN TOTO” DELLA GHIANDOLA:

- Cervicotomia
- Esposizione della ghiandola divaricando i muscoli pretiroidei
- Ricerca e salvaguardia delle paratiroidi e dei nervi laringei superiori ed inferiori
- Legatura separata dei peduncoli vascolari
- Tiroidectomia

A.F.O.I. di Endocrinochirurgia del collo – Regione Umbria
Loboistmectomia

• Stessa metodologia della tiroidectomia totale limitata ad un solo lato, estesa all’istmo
• Senza accedere assolutamente alla loggia controlaterale
The preferred extent of resection for benign uninodular goiter is lobectomy plus isthmectomy. For MNG, it is (near) total thyroidectomy [BEL 2, GRDE A].

AACE/ACE/AME Guidelines AMERICAN ASSOCIATION OF CLINICAL ENDOCRINOLOGISTS, AMERICAN COLLEGE OF ENDOCRINOLOGY, AND ASSOCIAZIONE MEDICI ENDOCRINOLOGI MEDICAL GUIDELINES FOR CLINICAL PRACTICE FOR THE DIAGNOSIS AND MANAGEMENT OF THYROID NODULES – 2016 UPDATE EXECUTIVE SUMMARY OF RECOMMENDATIONS

**RECOMMENDATION 19**

When surgery is considered for patients with a solitary, cytologically indeterminate nodule, thyroid lobectomy is the recommended initial surgical approach. This approach may be modified based on clinical or sonographic characteristics, patient preference and/or molecular testing when performed *(Strong recommendation, Moderate quality evidence)*

*Thyroid 2015 American Thyroid Association
2015 American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer*
RECOMMENDATION 20

A) Because of increased risk for malignancy, total thyroidectomy may be preferred in patients with indeterminate nodules which are cytologically suspicious for malignancy, positive for known mutations specific for carcinoma, sonographically suspicious, large (>4 cm), or in patients with familial thyroid carcinoma or history of radiation exposure, if completion thyroidectomy would be recommended based on the indeterminate nodule being malignant following lobectomy. (Strong recommendation, Moderate-quality evidence)

B) Patients with indeterminate nodules who have bilateral nodular disease, those with significant medical comorbidities, or those who prefer to undergo bilateral thyroidectomy to avoid the possibility of requiring a future surgery on the contralateral lobe, may undergo total or near-total thyroidectomy, assuming completion thyroidectomy would be recommended if the indeterminate nodule proved malignant following lobectomy. (Weak recommendation, Low quality evidence)
La chirurgia nel cancro della tiroide

- Lobectomia/Tiroidectomia totale extracapsulare

- Eventuale linfectomia del comparto centrale

  +

- Linfectomia laterocervicale se necessario
La chirurgia nel cancro della tiroide: lobectomia vs tiroidectomia totale

RECOMMENDATION 35

A) For patients with thyroid cancer >4 cm, or with gross extrathyroidal extension (clinical T4), or clinically apparent metastatic disease to nodes (clinical N1) or distant sites (clinical M1), the initial surgical procedure should include a near-total or total thyroidectomy and gross removal of all primary tumor unless there are contraindications to this procedure. (Strong Recommendation, Moderate-quality evidence)

B) For patients with thyroid cancer >1 cm and <4 cm without extrathyroidal extension, and without clinical evidence of any lymph node metastases (cN0), the initial surgical procedure can be either a bilateral procedure (near-total or total thyroidectomy) or a unilateral procedure (lobectomy). Thyroid lobectomy alone may be sufficient initial treatment for low risk papillary and follicular carcinomas; however, the treatment team may choose total thyroidectomy to enable RAI therapy or to enhance follow-up based upon disease features and/or patient preferences. (Strong Recommendation, Moderate-quality evidence)

C) If surgery is chosen for patients with thyroid cancer <1 cm without extrathyroidal extension and cN0, the initial surgical procedure should be a thyroid lobectomy unless there are clear indications to remove the contralateral lobe. Thyroid lobectomy alone is sufficient treatment for small, unifocal, intrathyroidal carcinomas in the absence of prior head and neck irradiation, familial thyroid carcinoma, or clinically detectable cervical nodal metastases. (Strong Recommendation, Moderate-quality evidence)
La chirurgia nel cancro della tiroide: linfectomia del comparto centrale

RECOMMENDATION 36

A) Therapeutic central-compartment (level VI) neck dissection for patients with clinically involved central nodes should accompany total thyroidectomy to provide clearance of disease from the central neck. (Strong Recommendation, Moderate-quality evidence)

B) Prophylactic central-compartment neck dissection (ipsilateral or bilateral) should be considered in patients with papillary thyroid carcinoma with clinically uninvolved central neck lymph nodes (cN0) who have advanced primary tumors (T3 or T4), clinically involved lateral neck nodes (cN1b), or if the information will be used to plan further steps in therapy. (Weak Recommendation, Low-quality evidence)

C) Thyroidectomy without prophylactic central neck dissection may be is appropriate for small (T1 or T2), noninvasive, clinically node-negative PTC (cN0) and for most follicular cancers. (Strong Recommendation, Moderate-quality evidence)
La chirurgia nel cancro della tiroide: l'infectomia latero-cervicale

**RECOMMENDATION 37**

Therapeutic lateral neck compartmental lymph node dissection should be performed for patients with biopsy-proven metastatic lateral cervical lymphadenopathy. (Strong Recommendation, Moderate-quality evidence)

*Thyroid 2015 American Thyroid Association*  
*2015 American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer*
Lo sviluppo tecnologico in chirurgia tiroidea

- Radiofrequenza

- Ultrasuoni

- Nerve monitoring
Lo sviluppo tecnologico in chirurgia tiroidea

✓ Minore trauma chirurgico

✓ Riduzione tempi operatori

✓ Riduzione degenza

✓ Migliori risultati estetici

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Grazie dell’attenzione!

Prof. Fausto Santeusanio

Prof. Efisio Puxeddu