

Clinical Evaluation of Goiter and Risk of Malignancy

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In patients with long-standing goiter, one of the first diagnostic questions is which clinical findings may prompt us to reconsider an initial impression of benign disease and pursue further evaluation to confirm potential malignancy. Although ultrasonography, cytology, and molecular testing have dramatically improved our diagnostic capabilities, the initial medical history and physical examination remain highly valuable. This is particularly relevant in socioeconomically disadvantaged settings where access to highly specialized medical care is limited.

In this issue of the *Revista del Hospital Italiano*, Dr. Daza presents a retrospective study of patients treated at a tertiary care hospital in Santa Cruz de la Sierra, Bolivia. The cohort comprised 193 patients who underwent surgery for goiter over an 11-year period, 76 of whom had differentiated thyroid carcinoma. The study aimed to identify associations between clinical and diagnostic findings at presentation and the presence of malignancy. The variables analyzed included hard, stony consistency or fixation to deep planes; rapid growth noticed by the patient during the previous year; urban residence or migration from a rural to an urban area more than 10 years earlier; suspicious ultrasound categories (TI-RADS ≥ 4); and Bethesda categories IV–VI on fine-needle aspiration cytology. In the multivariable analysis reported by the author, stony consistency or fixation was the only variable that remained independently statistically significant.¹

Dr. Daza's study is valuable in that it highlights a fundamental aspect of clinical assessment: recognizing changes in a condition that the patient reports as having remained stable for years. However, interpreting these findings requires a clear understanding of what is being observed and when. In the case of hard, stony consistency and fixation, the inclusion of intraoperative findings in this variable limits its interpretation as a predictor

available at the initial clinical assessment. Hard, stony consistency, decreased mobility, and fixation are related but not equivalent features. None of them, on its own, can conclusively establish the presence of malignancy.

The author also discusses glandular or nodular growth as a possible indicator of malignancy. Daza defines growth based on the patient's perception during the 12 months preceding consultation but does not report serial objective measurements. Moreover, this assessment inevitably involves a degree of subjectivity and is not comparable to growth documented by ultrasonography. A review by Bernet and Chindris (2021) emphasizes that, in nodules with benign cytology, ultrasound features play an important role in guiding follow-up and determining the need for further evaluation.²

In multinodular goiter, moreover, thyroid volume and the size of the dominant nodule may draw attention away from other clinically relevant lesions. In a surgical series of 838 patients who underwent surgery for multinodular goiter, Luo et al. found that only 37% of cancers were located in the largest nodule.³ For this reason, ultrasound evaluation should identify lesions based on suspicious features rather than relying on size alone to determine which nodules should undergo fine-needle aspiration.

Cytology provides specific diagnostic information. The Bethesda System distinguishes cytologic categories associated with different risks of malignancy, which should be interpreted in conjunction with ultrasound findings and the individual clinical context. Accordingly, the European Thyroid Association guidelines recommend an integrated assessment of clinical factors, laboratory findings, and ultrasound risk stratification to determine the indication for fine-needle aspiration.⁴

Regarding the anatomical extent of goiter, the likelihood of malignancy varies even in cervicothoracic and retrosternal goiters. Prete et al. found similar

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rates of unexpected cancer in retrosternal and cervical goiters without preoperative suspicion of malignancy.⁵ The 2025 ATA guidelines add an important perspective regarding clinical behavior: in the evaluation of differentiated thyroid cancer, rapid growth, fixation to cervical structures, progressive dysphagia, or significant voice changes may suggest locally invasive disease. When such disease is suspected, the guidelines recommend complementing physical examination and ultrasonography with contrast-enhanced CT or MRI.⁶ These findings can guide the evaluation of possible tumor extension but do not, by themselves, confirm invasion. However, once invasion has been established, it will necessarily affect the choice of treatment or the need for referral if the necessary resources are not available.

These considerations also apply to the interpretation of Daza's study. Its retrospective design and the selection of patients who underwent surgery limit the generalizability of the findings to the overall population of patients with goiter.

Nevertheless, the study highlights the importance of recognizing and promptly investigating clinical warning signs. In resource-limited settings, early identification of these findings may help prioritize access to ultrasonography, cytology, and more specialized evaluation. In summary, a careful medical history and thorough physical examination remain essential components of an assessment that should integrate

the available evidence with each patient's individual circumstances.

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