

IS CALCITONIN STIMULATION TEST RELIABLE TO DETECT MEDULLARY THYROID CARCINOMA IN PATIENTS WITH SLIGHTLY ELEVATED BASAL HYPERCALCITONINEMIA?

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Abstract body (should contain maximum 300 words)

PURPOSE. Calcitonin stimulation test (sCT) is recommended for patients with slightly elevated basal calcitonin (bCT). Surgery is proposed in sCT level >100 pg/ml because of the suspicion of medullary thyroid carcinoma (MTC). We aimed to verify the accuracy of this cut-off. **METHODS.** Medical records of all the patients with slightly elevated bCT (>10 pg/ml - <100 pg/ml), without history of familial MTC, who underwent thyroidectomy between February 2014 and January 2018 were reviewed. A cut-off >100 pg/ml was considered diagnostic of MTC. **RESULTS.** Fifty-six patients with bCT >10 pg/ml and <100 pg/ml were included. In 29 patients sCT was not performed: 23 with suspicious cytology, 4 with symptomatic goiter, and 2 patients with neck node metastases. The sCT was performed in 27 cases: in 24 patients sCT was positive (609.83 ± 547.43 pg/ml, range 103-1899) and correctly identified a MTC in 16 cases (66.7%). In the remaining 8 cases (33.3%) final histology showed C Cell Hyperplasia (CCH). The sCT was negative in 3 cases (68.76 ± 8.88 pg/ml, range 63-79): in 2 out of three patients (66.7%) final histology showed a MTC; in the remaining case (33.3%) pathologic report documented a CCH. Sensitivity, specificity, positive predictive value, negative predictive value and overall accuracy of the sCT >100 pg/ml cut-off were 94%, 11%, 67%, 33% and 63% respectively. **CONCLUSION.** In our experience, sCT cut-off >100 pg/ml failed to detect 2 cases of MTC and was positive in 8 patients with CCH. Management of patients with slightly elevated bCT should not be based only on sCT test.