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Thyroid pyramidal lobe identification on real-life routine ultrasound investigation and its clinical significance

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Background: The thyroid pyramidal lobe (TPL) represents a normal anatomical variation of the thyroid gland. Intraoperative TPL identification is of paramount significance, taking into account that the remnant TPL leads to higher thyroglobulin, could contain thyroid carcinoma foci and lead to recurrence.

Methods: We conducted a prospective single-center, single-operator study to identify TPL in 660 consecutive patients undergoing thyroid ultrasound for any indication. We extended the standard technique to actively search for TPL. The findings reported were presence and site of the TPL, presence of incidentally discovered nodules in TPL and thyroglossal duct cysts (TGDC). We excluded patients who underwent thyroid surgery or radioiodine therapy.

Results: Of the 660 consecutive patients, TPL was identified in 245 (37.1%), 8 had TGDC (1.2%), 2 had hemiagenesis of the left thyroid lobe. Ninety-eight patients (40%) presented with left-sided, 93 (38%) with right-sided, 43 with median-line (17.5%) and 11 (4.5%) with bilateral TPL. In 13 patients (5.3%), we identified incidental asymptomatic nodular lesions within TPL.

Conclusions: We suggest to routinely screen for thyroglossal duct remnants (TPL or TGDC) during thyroid ultrasound. This may reduce the rate of postoperative remnant TPL, obtain lower postoperative thyroglobulin levels and potentially lead to less frequent radioiodine therapy indication. Incidental discovery of thyroid nodules within TPL could also play important role in patient management. TGDC diagnosed incidentally may lead to the decision of prophylactic intervention to remove the cyst.

Biography

Dr Emin Mammadov is an endocrinologist with special interest in thyroid biology and tumors. His main areas of interest are clinical applications of the diagnostic and therapeutic methods, introducing some new methods for the first time in Romania (PEG precipitation for TSH to adapt the patient management and avoid unnecessary treatment or dose escalation). He is also interested in improving the diagnostic accuracy of thyroid samples being a pioneer in Romania in core-needle biopsy from thyroid, as well as liquid-based fine-needle aspiration technique. He was the first to search for thyroid pyramidal lobe in Romania, using simple ultrasound evaluation and mentioning its presence in his ultrasound reports to improve the patient outcomes.