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abstract

Insights of Pediatric Thyroid Cancer in Alexandria, Egypt: A 10-year single-center experience

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Insights of Pediatric Thyroid Cancer in Alexandria, Egypt: A 10-year single-center experience

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Introduction: Thyroid cancer (TC) is a showpiece pediatric malignancy, comprising ~1% of all childhood malignancies. Despite aggressiveness, it is a curable disease. We aimed to retrospectively review the management and outcomes of pediatric TC at Alexandria Main University Hospital and Borg-El-Arab University Hospital; Pediatric Oncology Center.

Methodology: Pediatrics with TC treated from November 2013 to December 2023 were included. Institutional descriptive data were analyzed and collected for demographics, risk factors, clinical presentations and management outcomes.

Results: A total of 29 patients (female=20) were included with a median age of 13. Almost all patients (n=28) had Papillary Thyroid Carcinoma while one patient had Medullary Thyroid Carcinoma. Risk factors included Hashimoto's thyroiditis (n=8), family history of TC (n=5) and goiter (n=3). Majority (n=21) presented with palpable cervical swelling. Thyroid ultrasonography showed 1 suspicious nodule in 16 patients, 1-3 nodules in 8 and >3 nodules in 5 patients, with TIRADS 4 in 55.2% of patients and TIRADS 3 in 34.5%.

Diagnostic FNAC was done in 65.5% of cases, while 6.8% had LN biopsy. Twenty-seven patients underwent total thyroidectomy with LN dissection in 16 cases (unilateral=11, bilateral=5). Pathological LN involvement only in 6 cases, while 8 had pulmonary & LNs metastasis and one patient was metastatic to lung only. Most noticed BETHESDA SCORE was V in 10 patients followed by IV in 8. Only 3 patients presented with signs of postoperative hypocalcaemia. According to American Thyroid Association risk stratification, 11 patients were labeled as high risk, 8 as IM risk & 9 as low risk. Postoperative ablative RAI doses were administered to most patients (96.6%), with residual detection in 89.3% and therapeutic response in 92.8%. Total dose of RAI received was >1.5 body weight in 44.8% of patients. 23 patients cured, 4 lost follow up, 1 had resistance while 1 relapsed.

Conclusion: Pediatric TC is an elusive manageable disease. Data analysis at our center imparted close outcomes to global ones.