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CLINICOPATHOLOGICAL FACTORS ASSOCIATED WITH OUTCOMES OF PATIENTS WITH PEDIATRIC DIFFERENTIATED THYROID CARCINOMA

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INTRODUCTION

Thyroid carcinoma in patients younger than 18 years is rare. It is associated with a higher risk of metastases. However, the prognosis for these patients is better when compared with that of adults.

Objective: To present the experience of a single institution and investigate the factors that influence the results in the treatment of pediatric patients with differentiated thyroid carcinoma.

PATIENTS AND METHODS

One hundred and eighteen patients with age ranging from 4 to 18 years, were treated with differentiated thyroid carcinoma between 1960 and 2017. There were 31 boys (26%) and 87 girls (74%). There were 113 papillary carcinoma, 5 follicular, and 2 Hürthle cell carcinoma. Twenty- four patients (20%) had lymph nodes metastasis at first clinical evaluation. Total thyroidectomies were performed in 104 patients (88%) (Figure 1,2 and 3). Lateral neck dissection was performed in 28 patients and paratracheal dissection in 50 patients. Adjuvant therapy was used in 66 patients (56%).

RESULTS

Postoperative complications occurred in 44 patients (37%). Hypocalcemia was the main complication, being transitory in 30 patients (25%) and permanent in 10 patients (8.4%). Postoperative dysfunction of the recurrent laryngeal nerve occurred in 8 patients (6.7). Two patients (1.7%) had a surgical site infection, and seroma occurred in 2 patients (1.7%). There were no postoperative deaths. Despite the high incidence of complications in our series, we did not observe any significant correlations with gender, age, nodule size, previous surgery, type of thyroidectomy, and neck or paratracheal dissection.

During the study period, after a mean follow-up of 10.5 years (range, 2-42.5 years), 114 patients (98.3%) were alive and had no evidence of disease, 2 (1.6%) were alive and had recurrent disease, 2 (1.6) died (1 of the disease and 1 of non-cancer-related causes). Overall survival rates at 10 and 20 years for the patients with papillary, and follicular carcinoma were 98.3% and 100%, respectively (p>0.05)(Figure 4).

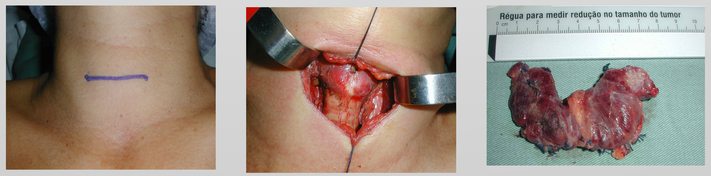

Figure 1,2 and 3 : Total thyroidectomy in pediatric patient with 13 years-old female

RESULTS

No significant differences were shown between the categories for gender, age, nodule size, tumor and nodal stages with survival. Similarly, the presence or absence of a previous surgical procedure, the type of surgery and adjuvant iodine therapy did not show prognostic correlation.

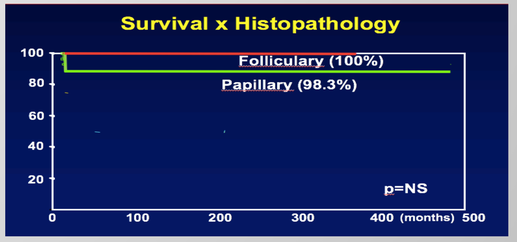

Figure 4 : Overall survival according to histopathology

CONCLUSION

Differentiated thyroid carcinoma in patients younger than 18 years has a excellent prognosis even in the presence of neck or distant metastasis. Total thyroidectomy, associated with adjuvant radioactive iodine therapy and thyroidal suppression or not, is effective in young patients with a differentiated thyroid carcinoma.