

# Management of childhood thyroid nodules in children a large group of cases from a single center.

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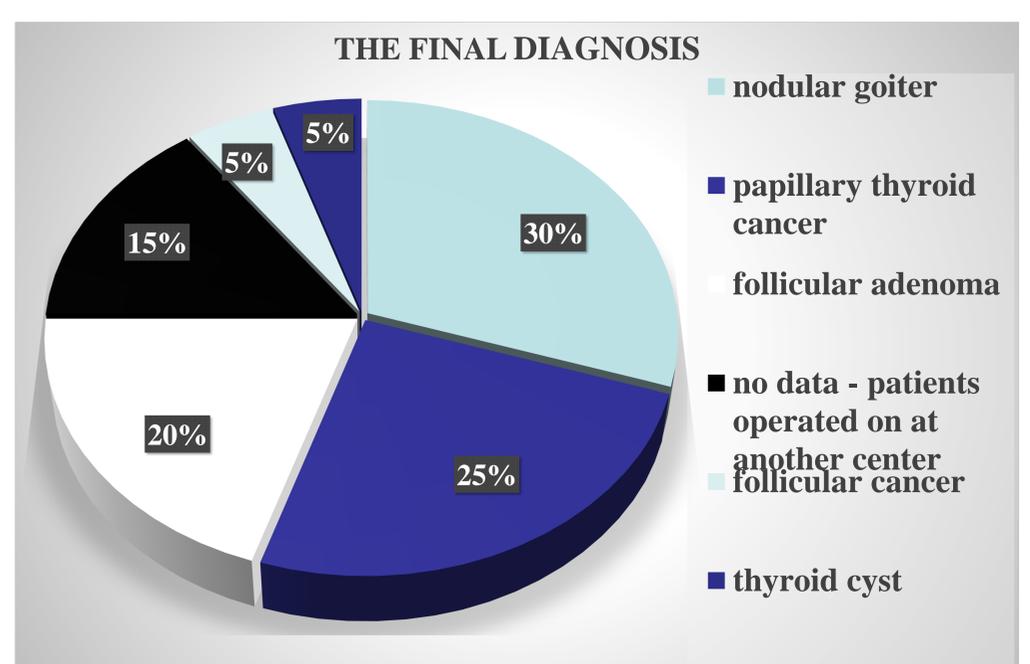
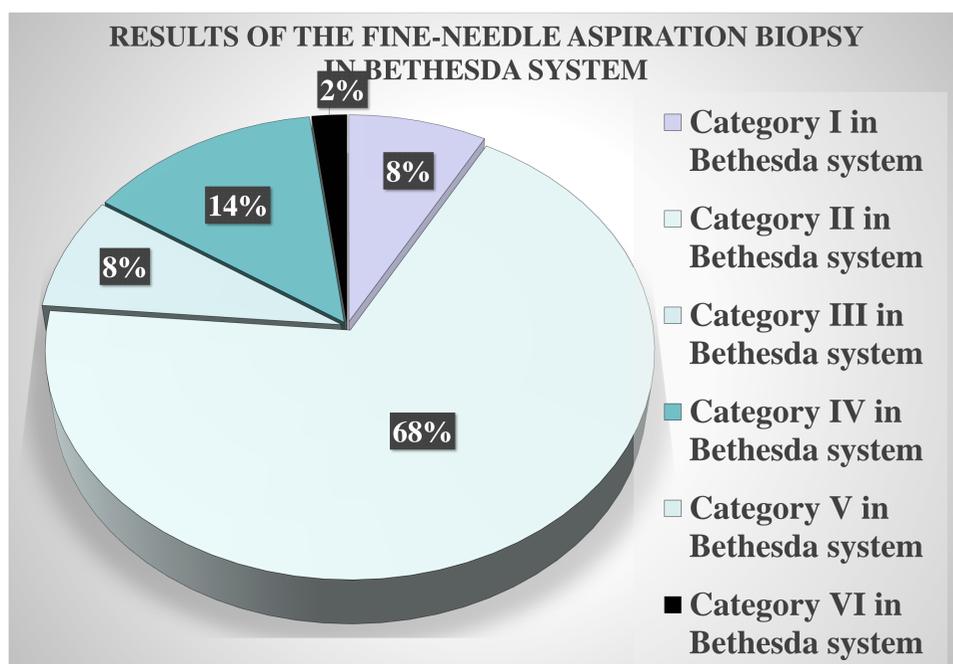
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## Background:

Thyroid nodules are quite common in the adult population (13%) but are relatively rarely diagnosed in childhood (0.2-5%). There is a significantly higher risk of malignancy of paediatric thyroid nodules than that in adult patients. The authors of this publication present the observations of the occurrence, diagnosis, and treatment of patients with thyroid nodules in the Department of Pediatric Endocrinology and Diabetology, Medical University of Lublin, Poland.

## Patients and methods:

We reviewed charts of patients diagnosed with thyroid nodules between March 2010 and December 2018.



## Results:

- We retrospectively investigated 67 children (49 females and 18 males) diagnosed with thyroid nodule in our centre. 29 children (43.28%) with high risk for DTC (differentiated thyroid cancer) underwent surgery and were labelled as a high-risk group. 38 children (56.72%) with low risk for DTC were observed without surgical intervention and referred to as a low-risk group.
- The mean age of all patients was 12 years 10 months (7 months - 18 years), the gender proportions in both groups were similar.
- Visible or palpable swelling in the neck was the presenting symptom on admission in 56 patients (83.58%). Increased risk for thyroid carcinoma related to a positive medical or family history was noted in 15 patients (22.39%). 6 patients had a history of thyroid diseases: Hashimoto thyroiditis (5 patients) and Graves' disease (1 patient). 1 patient had a history of neuroblastoma and had been treated with neck radiotherapy.
- Ultrasound results were found in all patients of both groups. The nodule size ranged from 0.3 to 5.3 cm. The mean nodule size was significantly larger in the high-risk group.
- Thyroid scintigraphy was performed in 7 patients (10.45%). 6 patients (8.96%) had hypoactive cold nodules and 1 had hyperactive hot nodules.
- FNAB was performed in 28 patients (41.79%). The FNAB result was benign in 22 patients (32.84%), non-diagnostic in 3 (4.48%), suspicious in 2 (2.99%), and malignant in 3 (4.48%).
- The surgical procedure was performed in 20 patients (29.85%). 5 patients (33.5%) underwent local excision of the suspected nodules, lobectomy was performed in 14 patients (20.9%), and total thyroidectomy was performed in 1 child (1.49%).
- Of the 67 patients, 17.91% ( $n = 12$ ) had thyroid carcinoma in the final pathological analysis.

## Conclusions:

A thyroid nodule in a child requires an aggressive diagnostic approach due to the increased risk of malignancy.

The authors declare no conflict of interest.