Surgical thyroid pathology in young children: clinical and pathological spectrum

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Aim: An assessment of clinical and pathological aspects of thyroid surgical diseases in young children and an attempt to provide guidelines in evaluation and management of this subset of patients.

Material: 183 children aged from 7 to 18 years operated on for thyroid pathology between 1993-2017

31 children (16.9%) less than 12 years of age - study group

Methods: retrospective analysis of medical records, operative notes and imaging studies

Diagnostic management: hormones, thyroid US scan, FN biopsy

Results: 14 children aged less than 10 years

17 children aged between 10-12 years

21 girls - 10 boys

Family history (+ve) - 41.9%

Clinical presentation:

Cervical nodule/mass - 16
Lower neck swelling - 12
Incidental diagnosis - 3

Hormonal status:

euthyroid - 27
hypothyroid - 1
hyperthyroid - 3

FNB: 26 children

17 - benign lesion
6 - suspicious
2 - malignant (1 x lymph node)
1 - not diagnostic

All children subjected to surgical management

Final pathology: nodular goitre - 11
follicular adenoma - 10
Hashimoto thyroiditis - 2
neurilemmoma - 2
Basedow - 1
dyshormonogenetic goitre - 1
cancer papillare - 3
cancer folliculare - 1

183 children - 11 x malignancy (6.1%)

31 < 12 years of age - 4 x malignancy (12.9%)

36.7% of thyroid cancer in young children

Conclusions:

Thyroid surgical diseases in young children present a serious clinical challenge. Persistent cervical nodule in a young child should be managed with caution and should be biopsied or excised whenever infectious etiology has been excluded. Early neck ultrasound should be recommended for all children with neck swelling or cervical nodule of unknown etiology. In a child with surgical disease of the thyroid gland, unilateral lobectomy should be regarded as a minimal extent of resection.