# Aetiology and different clinical condition of hypothyroidism in children and adolescents

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## Background

Hypothyroidism is a common problem encountered by paediatric endocrinologists. In children, the prevalence of hypothyroidism is about 0.15% with female to male ratio on target to 2.8. Normal thyroid synthesis and its action on target tissues are necessary for normal metabolism throught life, linear growth after birth and for normal development of the brain until 3 years of age. Endemic and nodular goiter, thyroiditis, congenital and acquired hypothyroidism are group of the most common thyroid disorders.

### **Objective**

To evaluate clinical features, etiology and evolution of patients with hypothyroidism

## **Results**

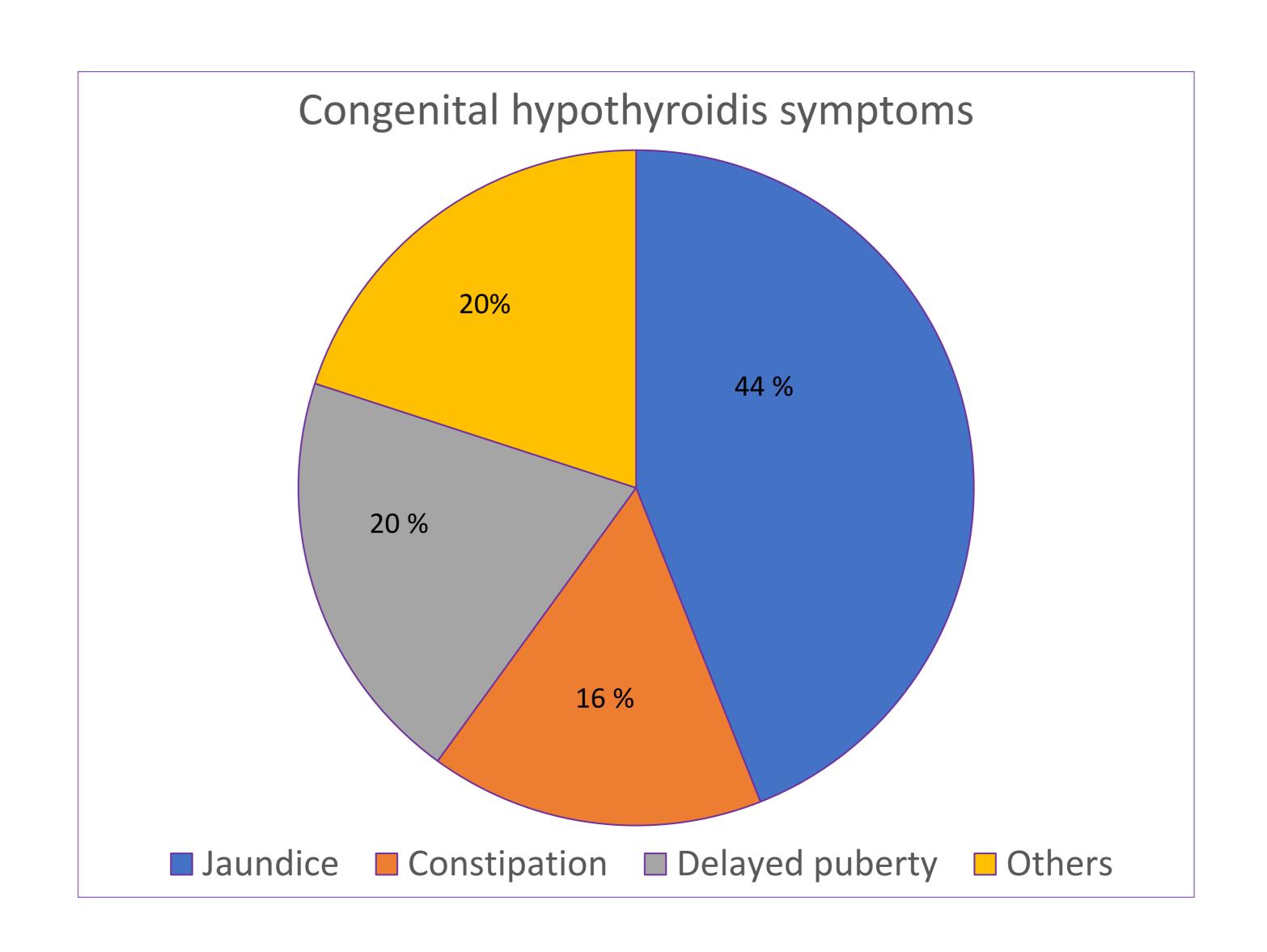
74 cases were identified: 42 F/32 M, the patient's average age at diagnosis was 9 (range 0.1-144) months in congenital hypothyroidism, and 7(range 1-15) years in acquired hypothyroidism. Consanguinity was present in 8(11%) of cases, and family history of thyroid disease in 28 (38%). In congenital hypothyroidism (25 cases), the most common symptom was jaundice. In acquired hypothyroidism (49 cases), the most common symptoms were goiter, and fatigapility. In the laboratory evaluation, we highlight: high TSH in all patients, low free T4 in 96%, 3 patients had a subclinical hypothyroidism; elevated title of antiperoxidase were found in 40 patients.

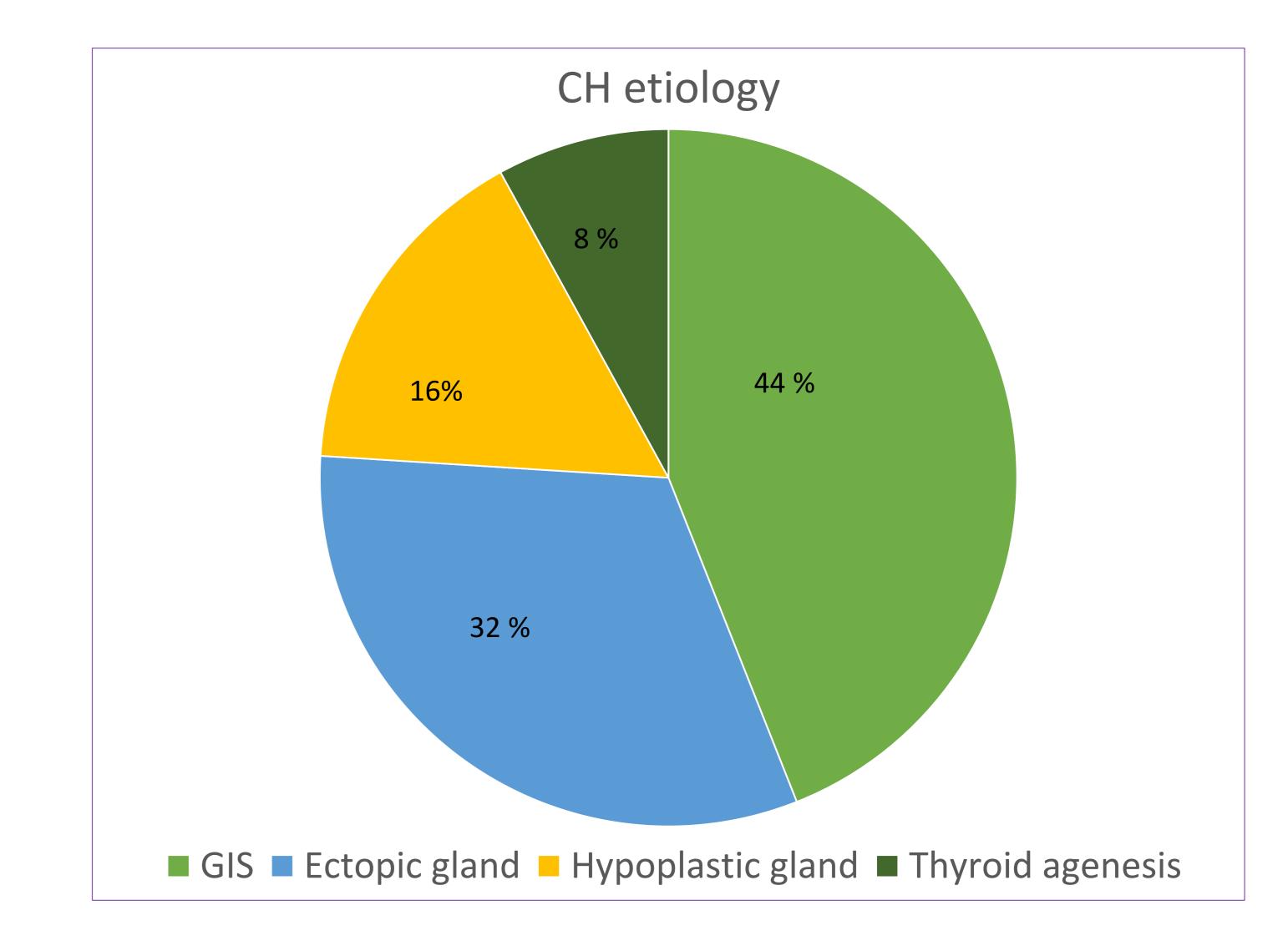
There were 25 patients with congenital hypothyroidism: 2 cases of Down syndrome,11 cases of gland in situ. 40 patients had Hashimoto's thyroiditis, and 9 of them presented type1 DM, 9 patients had Down syndrom. Majority of patients received L-thyroxin (96%) and mean age to start it in congenital hypothyroidism was 9 (range 0.1-114) months. Among re-evaluated patients (13 cases), 9 cases had permanent hypothyroidism at 3 years.

#### Methods

Longitudinal retrospective study of patients diagnosed with hypothyroidism between 2004 and 2019. Study was conducted in the west of Algiers. Age at diagnosis, clinical characteristics and initial dose of treatment were recorded. Patients were classified according to etiology.

In congenital hypothyroidism, neurocognitive assessment was based on intelligence quotient (IQ).





#### Comments

<u>M</u>any etiologies can be at the origin of hypothyroidism. It's important to distinguish the congenital from the acquired. The permanent congenital hypothyroidism is the commonest treatable cause of learning difficulties.

It's necessary to reassess children diagnosed with CH to distinguish transients from permanent ones

## Conclusion

The diagnosis of congenital hypothyroidism remains late in our country, the only alternative is the screening facilities. Management and prognosis depend on etiology.

