Very early onset of autoimmune thyroiditis in a toddler with multi-organ involvement

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BACKGROUND

In infants under 3 years of age acquired primary hypothyroidism caused by autoimmune thyroiditis is very rare. Hypothyroidism can manifest with different signs and symptoms and has a wide range of presentations from subclinical hypothyroidism to overt form.

OBJECTIVE

We describe a child with an unusual hypothyroidism presentation characterized by multi-organ involvement and related to acquired autoimmune thyroiditis during a very early period of life.

METHODS

A 22-month-old white male patient with normal neonatal screening presented with a six-month history of asthenia and cutaneous pallor. At general clinical and biochemical exams he showed sleepy expression (Fig. 1, Panel D), weight gain, statural growth deceleration (Fig.2), poor movements, instability while walking, myxoedema, bradycardia, open anterior fontanelle, changes in the face habitus, macrocytic anaemia, ascites, and high CPK, creatinine and cholesterol levels.

RESULTS

Thyroid-stimulating hormone (TSH), free thyroxine (fT4), free triiodothyronin (fT3) were >200 µIU/mL, 1.39 pg/mL and 0.5 pg/mL, respectively. The levels of thyroid peroxidase antibodies and thyroglobulin antibodies were high (2017 IU/L and 1743 IU/L, respectively); sonographic thyroidal evaluation demonstrated normal anatomy with non-homogeneous echotexture. Because the neonatal screening for congenital hypothyroidism was normal, a diagnosis of hypothyroidism related to autoimmune thyroiditis was determined. The thyroxin replacement therapy normalized all the clinical and biochemical abnormalities (Fig.1,2).

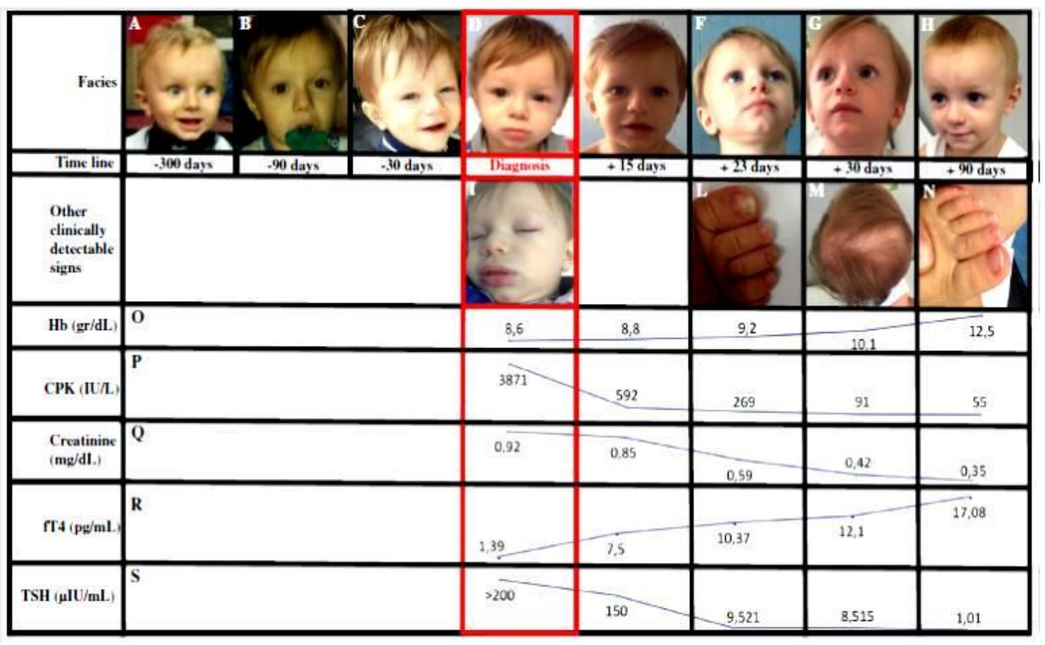

Fig 1

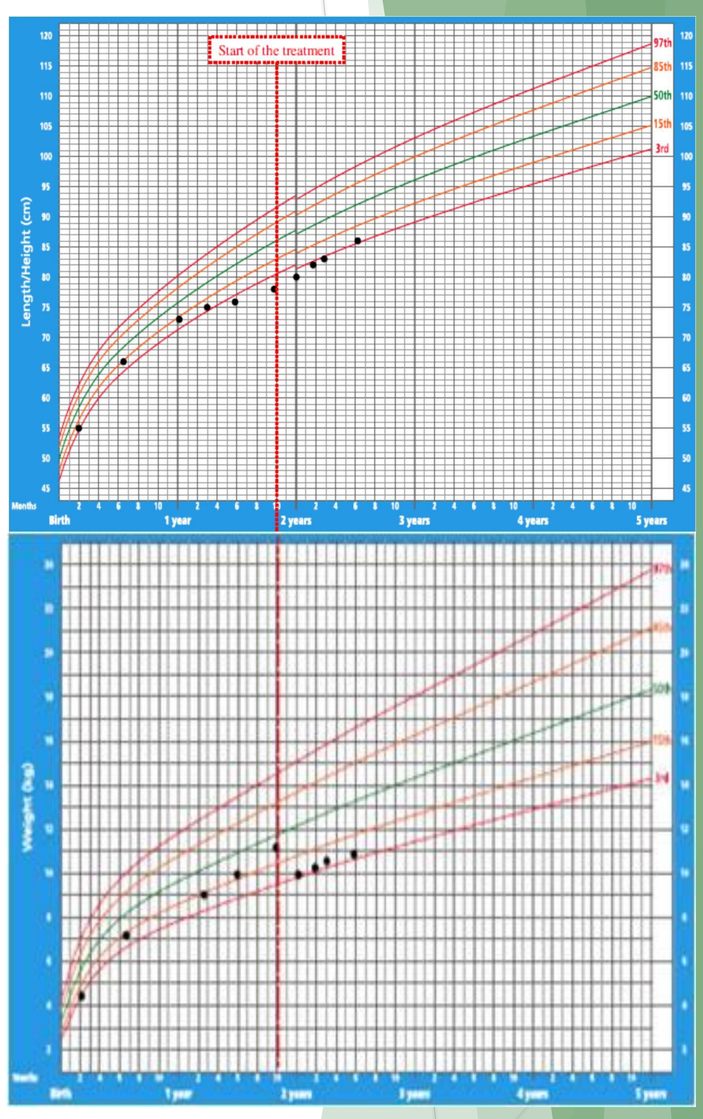

Fig. 2

CONCLUSIONS

Our case could give useful learning points:

1. although the screening for congenital hypothyroidism is routinely performed, a severe hypothyroidism (for example due to autoimmune thyroiditis) can anyway occur early in life and the clinicians should consider this possibility
2. hypothyroidism can have a misleading and multi-face clinical presentation: anemia, rhabdomyolysis and high creatinine levels should always include the hypothyroidism in the differential diagnosis;
3. thyroxine replacement therapy is able to revert all the clinical manifestations related to the hypothyroidism but close follow-up of cognitive development is needed;
4. evaluating the patient's previous pictures could play an important role in resolving a diagnostic conundrum

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Thyroid

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