

# Congenital hypothyroidism

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A 5 day old baby , term, referred with TSH 150 Iu/ml (very high)  
fT4 6 pg/ml ( very low), how do you approach this problem?

- TFT repeated on same day showed same values, no signs of cretinism.
- DDX : agenesis (most common)/ectopia/dyshormonogenesis
- Scan revealed athyreosis ( ultrasound can be enough)
- Never delay treatment to do imaging, start as soon as possible
- Treatment started
- TFT normalized in 4 weeks, kept so for 12 mths with progressive increase in dosing

- Not all patients with congenital hypothyroidism will present with cretinism at birth, that is why screening is essential in the first 3-5 days of life.



- All neonates with high TSH concentrations should be examined carefully for congenital malformations (particularly cardiac) and for dysmorphic features
- L-T 4 treatment should be initiated as soon as possible and **no later than 2 weeks after birth** or immediately after confirmatory serum test results in infants in whom CH is detected by a second routine screening test .
- An initial L-T4 dose of 10–15  $\mu\text{g}/\text{kg}$  per day should be given

- How do you monitor the treatment?

- TSH concentration should be maintained in the age specific reference range; FT4 concentration should be maintained in the upper half of the age-specific reference range .
- Any reduction of L-T 4 dose should not be based on a single increase in FT4 concentration during treatment .
- The first follow-up examination should take place 1–2 weeks after the start of L-T 4 treatment .
- Subsequent evaluation should take place every 2 weeks until a complete normalization of TSH concentration is reached; then every 1 to 3 months thereafter until the age of 12 months . Between the ages of one and three years, children should undergo frequent clinical and laboratory evaluations (every 2 to 4 months) . Thereafter, evaluations should be carried out every 3 to 12 months until growth is completed .

- More frequent evaluations should be carried out if compliance is questioned or abnormal values are obtained .
- Additional evaluations should be carried out 4–6 weeks after any change in L-T 4 dose or formulation .
- Adequate treatment throughout childhood is essential and overtreatment should be avoided



- Very important to do regular growth assessment using age and gender appropriate charts.
- In addition , proper assessment of the development regularly.

Thank You