

Lack of catch up growth in young children with severe Hashimoto thyroiditis

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Context :

Profound hypothyroidism due to Hashimoto thyroiditis (HT) is a cause of severe growth arrest in children. Although it is commonly thought that thyroxine replacement fully restores the height deficit, no data on catch up growth are available.

The objective of the study was to assess the growth pattern and final height in a series of 10 patients with severe HT after l-thyroxine therapy was initiated.

Méthods:

Monocentric retrospective observational study of 10 children referred for growth failure and diagnosed with severe hypothyroidism between 1999 and 2015. Data are shown as median [min – max].

Résultats:

8 girls and 2 boys were included (see growth charts) with the following characteristics at diagnosis:

- Age: medial 9,8 years [8,2 - 13,6]
- TSH: 624 mUI/L [100 – 1844] (N: 0,5 – 4)
- T4L 0,6 pmol/L [undetectable – 5,4] (N:10 – 18)
- Anti-TPO Anti-bodies: 18 850 [310 – 25310] (N:<34).

10/10 of the children presented with a severe growth failure: height SDS decreased because of the HT from -0.2 SDS [-1 ; 2], to -2.9 SDS [-4.7 ; -1] (<0,0001).

Upon L-thyroxine therapy, height improved up to -2 SDS [-3.8; 0] (n=9) and -1 SDS [-2.7; 1] (n=5), at 1 and 3 years, respectively.

An median final height of -1.1SDS [-2.7;1.5] was reached in 4 children. Among them, one received rGH.

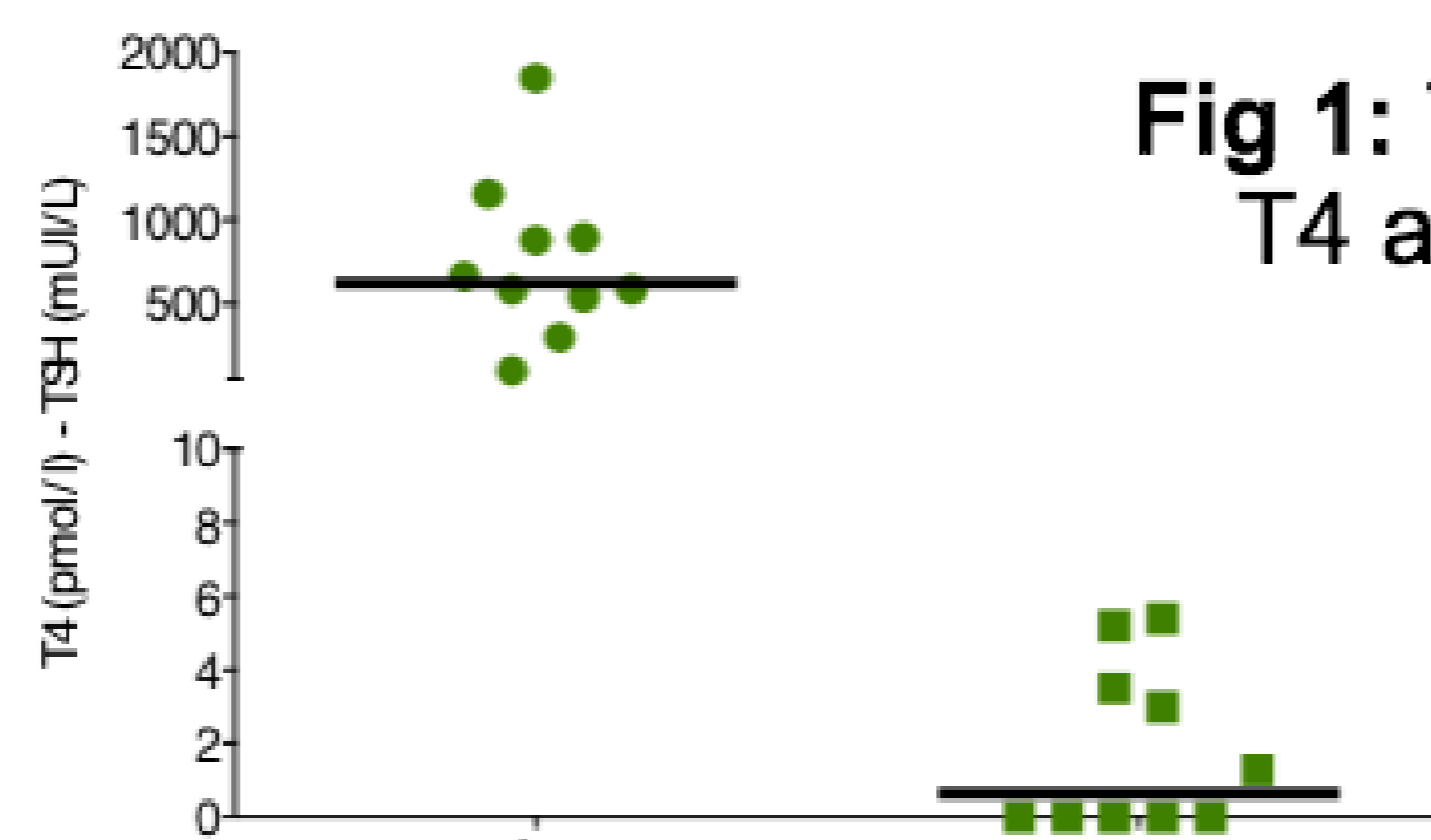
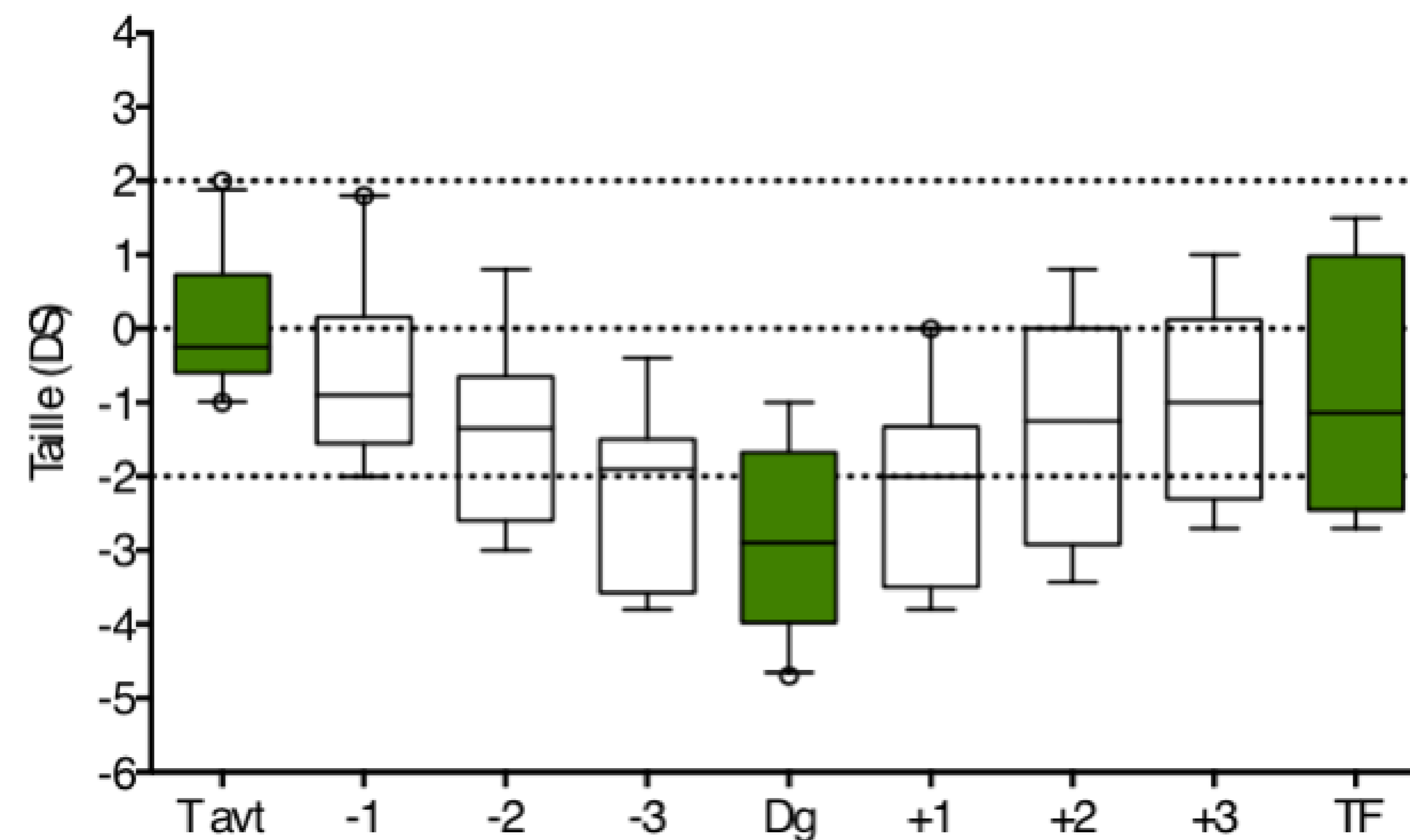
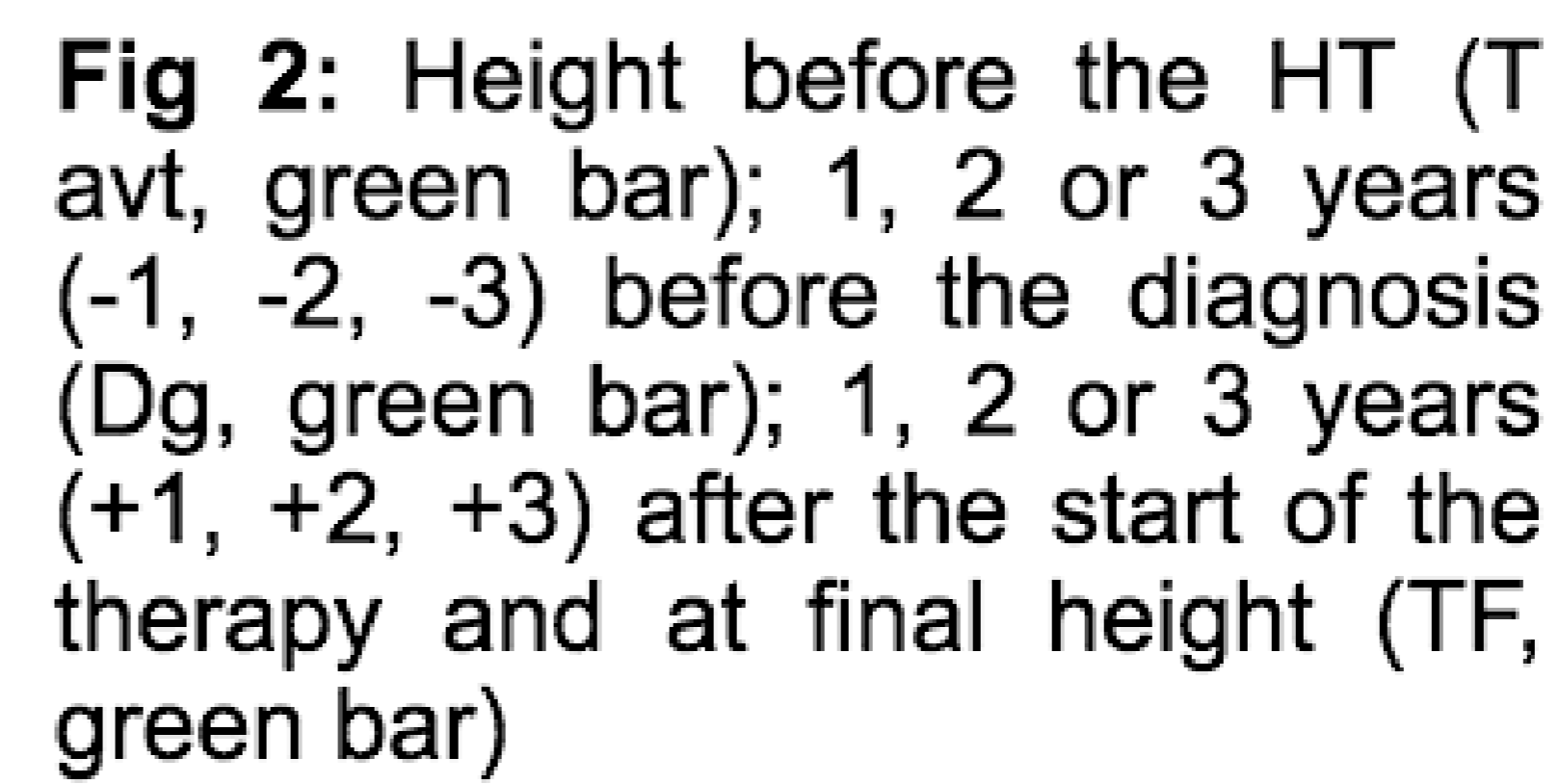


Fig 1: TSH and free T4 at diagnosis



Conclusion:

Despite the restoration of euthyroidism and the significant improvement of the growth velocity upon treatment, the catch up growth seems incomplete in this series of patients.

