

RECTAL DILUTED LEVOTHYROXINE FOR THE TREATMENT OF NEONATAL HIPOTHYROIDISM: AN ALTERNATIVE ROUTE OF ADMINISTRATION

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BACKGROUND

Most individuals with neonatal hypothyroidism present clinically asymptomatic or with few symptoms.

Early treatment with oral levothyroxine prevents complications related to this disorder.

We report a case of a male infant with Short Bowel Syndrome (SBS) and hypothyroidism treated with rectal diluted levothyroxine.

CASE AND PRESENTATIONS

A male patient with previous gastroschisis underwent multiple surgical approaches for small bowel resection and developed SBS.

We suspected of hypothyroidism when he was 4 months old because of:

- jaundice (direct bilirubin up to 59mg/dL)
- the absence of evacuation
- oral diet intolerance
- intestinal dysmotility

The diagnosis was confirmed after a TSH=34.45 μ IU/mL and a FT4=0.64ng/dL.

As fasting was necessary because of SBS, **we started rectal diluted levothyroxine.**

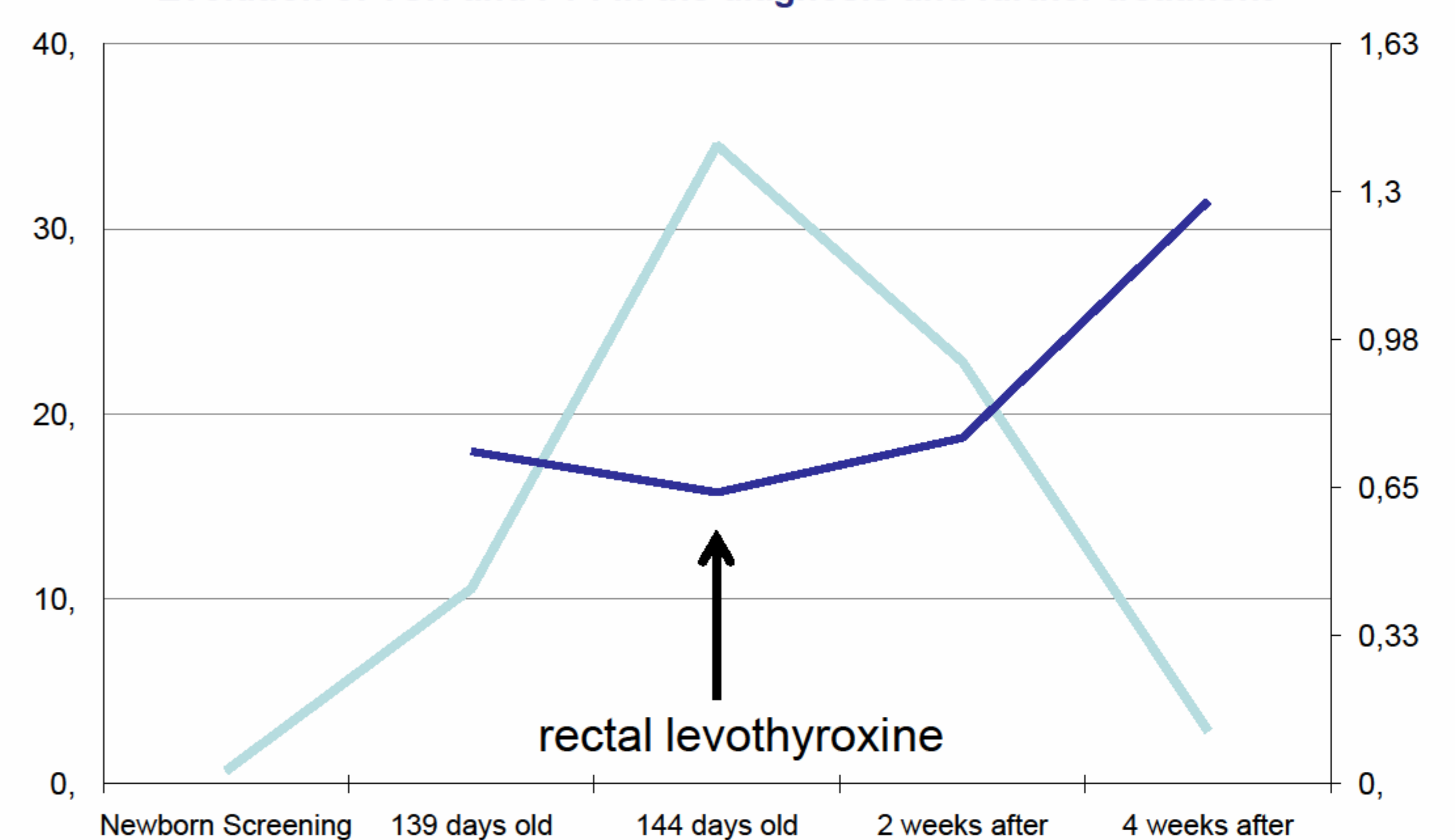
After **4 weeks**, the patient had:

- spontaneous bowel movements
- improvement of jaundice
- direct bilirubin = 4.62mg/dL
- FT4=1.34ng/dL
- TSH=0.75 μ IU/L



Plain abdominal radiograph, with intense dilatation of intestinal segments

Evolution of TSH and FT4 in the diagnosis and further treatment



	Diagnosis	7 days after	4 weeks after	
TSH (μ IU/mL)	34.45	22.81	2.85	(0.27-4.2)
FT4 (ng/dL)	0.64	0.76	1.28	(0.93-1.7)

Table 1: Evolution of TSH and FT4 levels.

CONCLUSION

In the present case the patient was on fasting because of SBS. An alternative route for drug administration was warranted. **We empirically prescribed rectal diluted levothyroxine** because intravenous and suppository levothyroxine were not available. This method proved to be **safe and effective** on improving the patient clinical status besides normalizing FT4 and TSH.