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=34.45μU/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=0.75μU/L

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>TSH (μU/mL)</th>
<th>7 days after</th>
<th>4 weeks after</th>
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<tbody>
<tr>
<td>FT4 (ng/dL)</td>
<td>0.64</td>
<td>0.76</td>
<td>1.28</td>
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<td>(0.93-1.7)</td>
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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.