Thyroglobulin (Tg) levels post initial treatment predict the recurrence risk in differentiated thyroid carcinoma (DTC)


OBJECTIVE

To evaluate if Tg levels after DTC treatment (total thyroidectomy and radioiodine ablation) can predict its prognosis in the long term.

METHODS

Tg after rh-TSH was measured in 229 DTC patients with negative neck ultrasonography after treatment. The group was followed up until tumour recurrence or for a minimum time of 12 month (mean ± SD = 63 ± 37 months). Patients did not receive any additional treatment during this period.

Test response was classified in three categories according to stimulated Tg levels. All selected cases had negative Tg-antibodies.

RESULTS

<table>
<thead>
<tr>
<th></th>
<th>Stimulated Tg &lt;1 ng/mL</th>
<th>1-10 ng/mL</th>
<th>&gt;10 ng/mL</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrence YES</td>
<td>1 (0,5 %)</td>
<td>8 (21,6 %)</td>
<td>7 (70 %)</td>
<td>16</td>
</tr>
<tr>
<td>Recurrence NO</td>
<td>181</td>
<td>29</td>
<td>3</td>
<td>213</td>
</tr>
<tr>
<td>Total</td>
<td>182</td>
<td>37</td>
<td>10</td>
<td>229</td>
</tr>
</tbody>
</table>

Tumour recurrence was localized: 14 lymphadenopathy, 1 lung metastasis, 2 local. Time recurrence: 3 - 104 months (mean: 41, median 34)

We studied evolution (measurement every 1-2 years) of stimulated Tg levels in patients with initial positive levels but no tumour recurrence detected (n = 32; 7 cases not measured).

Tg levels increased only in 8 cases (32%), as detailed in the graphic.

CONCLUSIONS

When stimulated Tg levels post-treatment are undetectable, the risk of recurrence is minimal. This risk increases according to Tg levels.

However, it has to be considered that a positive Tg level can decrease and even become negative during the follow-up.