QUALITY OF LIFE IN PRIMARY HYPOTHYROIDISM AFTER LONG-TERM LEVOTHYROXINE REPLACEMENT

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Introduction: there is an increasing awareness for intrinsic imperfections of endocrine replacement therapy affecting general well-being in the long-term. Many factors affect the variable responses to hormone replacement, like common genetic variations in deiodinase and thyroid hormone transport proteins, and the inability to provide adequate individual combined T4 and T3 therapy. Despite L-thyroxine replacement in primary hypothyroidism and restoration of biochemical euthyroidism, many patients have persistent complaints that have anecdotally been associated to high levels of antibodies against TPO.

Aim:
- to assess Quality of life (QoL) in patients with Hashimoto thyroiditis (HT) on adequate and long-term L-thyroxine (LT4) replacement
- to explore potential associations between QoL and serum TSH and anti-TPO

Patients and methods: cross-sectional, case-control study. 120 patients on long-term LT4 replacement for HT (mean age 54.0±14.0yrs, range 21–75yrs) and 60 euthyroid control subjects (aged 53.1±12.4), matched for age, gender, and educational level. Methods: evaluation of FT4, TSH, and anti-TPO concentrations, and of QoL (as measured with SF-36 for mental health and vitality in both patients and controls). Patients and controls were subdivided into 2 age-groups: 20-49(yrs) and 50-75 yrs, with a mean duration of T4 replacement of 3.9yrs and 9.27yrs, respectively.

Results:

<table>
<thead>
<tr>
<th>Correlations</th>
<th>TSH</th>
<th>TPO Ab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale 1</td>
<td>0.295***</td>
<td>0.161*</td>
</tr>
<tr>
<td>Scale 2</td>
<td>-0.163</td>
<td>-0.208*</td>
</tr>
<tr>
<td>Scale 3</td>
<td>-0.251**</td>
<td>-0.268**</td>
</tr>
<tr>
<td>Scale 4</td>
<td>-0.073</td>
<td>-0.198*</td>
</tr>
<tr>
<td>Scale 5</td>
<td>-0.156</td>
<td>-0.148</td>
</tr>
<tr>
<td>Scale 6</td>
<td>-0.164</td>
<td>-0.140</td>
</tr>
<tr>
<td>Scale 7</td>
<td>-0.013</td>
<td>-0.040</td>
</tr>
<tr>
<td>Scale 8</td>
<td>-0.084</td>
<td>-0.073</td>
</tr>
<tr>
<td>Dimension A</td>
<td>-0.162</td>
<td>-0.224**</td>
</tr>
<tr>
<td>Dimension B</td>
<td>-0.118</td>
<td>-0.163</td>
</tr>
<tr>
<td>Reported health</td>
<td>-0.172</td>
<td>-0.058</td>
</tr>
<tr>
<td>SF36 score</td>
<td>-0.156</td>
<td>-0.191*</td>
</tr>
</tbody>
</table>

* p<0.05  ** p<0.01  *** p<0.000

Conclusion: patients with HT on long-term levothyroxine replacement have impaired QoL that is associated with higher anti-TPO levels.