

Is there a role for Natural Desiccated Thyroid in the treatment of levothyroxine unresponsive hypothyroidism? Results from a Consecutive Case Series

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Abstract

Introduction Some levothyroxine unresponsive individuals with hypothyroidism are prescribed a Natural Desiccated Thyroid (NDT) preparation such as Armour Thyroid® or ERFA Thyroid®. These contain a mixture of levothyroxine and liothyronine in a fixed ratio. We evaluated the response to NDT in individuals at a single endocrine centre in terms of how the change from levothyroxine to NDT impacted on their lives in relation to quality of life (QOL) and thyroid symptoms. **Methods** The ThyPRO39 (thyroid symptomatology) and EQ-5D-5L-related QoL/EQ5D5L (generic QOL) questionnaires were administered to 31 consecutive patients who had been initiated on NDT, before initiating treatment/6 months later. **Results** There were 28women/3men. The dose range of NDT was 60mg-180mg daily. Age range was 26-77 years with length of time since diagnosis with hypothyroidism ranging from 2-40 years. One person discontinued the NDT because of lack of response; 2 because of cardiac symptoms. EQ-5D-5L utility increased from a mean (SD) of 0.214 (0.338) at baseline, to 0.606 (0.248) after 6 months; corresponding to a difference of 0.392 (95% CI 0.241-0.542), $t=6.82$, $p<0.001$. EQ-VAS scores increased from 33.4 (17.2) to 71.1 (17.5), a difference of 37.7 (95%CI 25.2-50.2), $t=-4.9$, $p<0.001$. ThyPRO scores showed consistent fall across all domains with the composite QoL-impact Score improving from 68.3 (95%CI 60.9-75.7) to 25.2 (95%CI 18.7-31.7), a difference of 43.1 (95%CI 33. -53.2) ($t=5.6$, $p<0.001$). **Conclusion** Significant symptomatic benefit and improvement in QOL was experienced by people with a history of levothyroxine unresponsive hypothyroidism, suggesting the need for further evaluation of NDT in this context.

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Table 11 NDT Populated 9 Aug 2021.docx available at <https://authorea.com/users/312300/articles/538445-is-there-a-role-for-natural-desiccated-thyroid-in-the-treatment-of-levothyroxine-unresponsive-hypothyroidism-results-from-a-consecutive-case-series>