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Patients' Persistent Symptoms, Clinician Demographics, and Geo-Economic Factors Are Associated with Choice of Therapy for Hypothyroidism by European Thyroid Specialists: The "THESIS" Collaboration

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Abstract

Background: Hypothyroidism is common, however, aspects of its treatment remain controversial. Our survey aimed at documenting treatment choices of European thyroid specialists and exploring how patients' persistent symptoms, clinician demographics, and geo-economic factors relate to treatment choices. **Methods:** Seventeen thousand two hundred forty-seven thyroid specialists from 28 countries were invited to participate in an online questionnaire survey. The survey included respondent demographic data and treatment choices for hypothyroid patients with persistent symptoms. Geo-economic data for each country were included in the analyses. **Results:** The response rate was 32.9% (6058 respondents out of 17,247 invitees). Levothyroxine (LT4) was the initial treatment preferred by the majority (98.3%). Persistent symptoms despite normal serum thyrotropin (TSH) while receiving LT4 treatment were reported to affect up to 10.0% of patients by 75.4% of respondents, while 28.4% reported an increasing such trend in the past 5 years. The principal explanations offered for patients' persistent symptoms were psychosocial factors (77.1%), comorbidities (69.2%), and unrealistic patient expectations (61.0%). Combination treatment with LT4+liothyronine (LT3) was chosen by 40.0% of respondents for patients who complained of persistent symptoms despite a normal TSH. This option was selected more frequently by female thyroid specialists, with high-volume practice, working in countries with high gross national income per capita. **Conclusions:** The perception of patients' dissatisfaction reported by physicians seems lower than that described by hypothyroid patients in previous surveys. LT4+LT3 treatment is used frequently by thyroid specialists in Europe for persistent hypothyroid-like symptoms even if they generally attribute such symptoms to nonendocrine causes and despite the evidence of nonsuperiority of the combined over the LT4 therapy. Pressure by dissatisfied patients on their physicians for LT3-containing treatments is a likely explanation. The association of the therapeutic choices with the clinician demographic characteristics and geo-economic factors in Europe is a novel information and requires further investigation.

Keywords: geo-economics; hypothyroidism; levothyroxine; quality of life; survey; triiodothyronine.

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