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MON-576 Ultrasound Changes of Healthy Thyroides over Six Years in Adults

Giulia Brigante, PhD, MD, Maria Laura Monzani, MD, Locaso Michela, MD, Valentina Luisa Gnarini, MD, Luigi Graziadei, MD, Shaniko Kaleci, PhD, Maria Cristina De Santis, MSc, Simonetta Tagliavini, MD, Manuela Simoni, MD, PhD, Vincenzo Rochira, MD, PhD, Bruno Madeo, MD, PhD

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Abstract

Background. The need to re-test adults with negative thyroid ultrasound has not been elucidated yet. The aim of this study was to evaluate the incidence of thyroid disease in patients with previously negative thyroid US and to find any possible correlation with anamnestic or clinical features, and pituitary-thyroid axis function changes. **Methods.** Subjects who resulted without thyroid nodules in a screening study (1) were re-tested after at least 5 years. Anamnestic (familiarity, radiation therapy, previous pregnancies, smoking habit) and physical data (thyroid palpation, anthropometric measurements, blood pressure) were collected. Neck ultrasound evaluation was performed by an experienced endocrinologist who recorded detailed thyroid and nodules characteristics. When nodules were present, American Thyroid Association classification for prediction of thyroid cancer risk was applied. Serum samples were collected for measurement of TSH, free thyroid hormones, calcitonin and anti-thyroid antibodies. Clinical and anamnestic, physical, sonographic and serological characteristics were analyzed with logistic regression analysis for subjects with nodules versus those without nodules. **Results.** A total of 111 subjects were enrolled (43 M, 68 F). Half of them presented new thyroid nodules, mostly smaller than 1 cm and not suspicious. The 4% had high levels of anti-thyroid antibodies. Ninety-seven percent were euthyroid. Incidence of thyroid diseases was higher in women, especially in nulliparous. Comparing clinical characteristics of subjects with and without nodules, the only statistically significant difference concerned thyroid volume adjusted for body weight or surface ($p < 0.05$). Finally, none of the anamnestic, physical,

sonographic or serological values were predictive of the risk of developing thyroid nodules at logistic regression analysis. **Conclusions.** These results suggest that it is not indicated to repeat thyroid US after only 6 years in healthy subjects, even if they might develop small and clinically irrelevant thyroid nodules. (1) Gnarini VL, Brigante G, Della Valle E, Diazzi C, Madeo B, Carani C, Rochira V, Simoni M 2013 Very high prevalence of ultrasound thyroid scan abnormalities in healthy volunteers in Modena, Italy. *J Endocrinol Invest* 36:722-728.

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