

interventions. Establishing the underlying etiology of the thyrotoxicosis would have long term implications regarding prognosis and treatment.

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Thyroid

HPT-AXIS AND THYROID HORMONE ACTION

Thyroid Function, Cardiovascular Disease, and Mortality: A Mediation Analysis

Kosuke Inoue, MD¹, Beate Ritz, MD, PhD¹, Gregory A. Brent, MD², Ramin Ebrahimi, MD³, Connie Rhee, MD, MSc⁴, Angela M. Leung, MD, MSc⁵.

¹UCLA, Department of Epidemiology, Los Angeles, CA, USA, ²UCLA/VA Greater LA, Tarzana, CA, USA, ³UCLA, Department of Medicine, Los Angeles, CA, USA, ⁴University of California Irvine, Huntington Beach, CA, USA, ⁵UCLA David Geffen School of Medicine, Pasadena, CA, USA.

SAT-447

Background: Subclinical hypothyroidism is a common clinical entity among the United States (U.S) adults and has been associated with increased risk of cardiovascular disease (CVD) and mortality in some studies. However, the mediation effect of CVD from elevated serum thyroid stimulating hormone (TSH) to mortality has not yet been well established or sufficiently quantified. In this study, we aimed to elucidate the extent to which subclinical hypothyroidism or high-normal thyroid stimulating hormone [TSH] concentrations (i.e. upper normative-range TSH concentrations) contribute to mortality through its effect on CVD among U.S. adults.

Methods: This study relies on the U.S. representative samples of 9,020 adults enrolled in the National Health and Nutrition Examination Surveys (NHANES) 2001-2002, 2007-2012 and their mortality data through 2015. We employed Cox proportional hazards regression models to investigate associations between the TSH concentration categories (subclinical hypothyroidism or tertiles of serum TSH concentrations within the reference range) and all-cause mortality. Utilizing mediation analysis within the counterfactual framework, we estimated the mediation effect of CVD on the association between TSH and all-cause mortality.

Results: The median duration of follow-up for mortality ascertainment was 7.3 (interquartile range, 5.4–8.3) years, during which 435 deaths from all causes were identified. Subjects with TSH in the subclinical hypothyroidism and the high-normal TSH tertile concentrations were associated with increased all-cause mortality (subclinical hypothyroidism: hazard ratio [HR], 1.90; 95% confidence interval [CI], 1.14–3.19; high-normal TSH: HR, 1.36; 95% CI, 1.07–1.73) compared with the middle-normal TSH

tertile concentration. CVD mediated 14.3% and 5.9% of the effects of subclinical hypothyroidism and high-normal TSH on all-cause mortality, respectively, with the CVD mediation effect being most pronounced in women and subjects ≥ 60 years old. No mediation through CVD was found for low-normal TSH levels and all-cause mortality.

Conclusion: CVD mediated the effects of subclinical hypothyroid and high-normal TSH concentrations on all-cause mortality in the U.S. general population. These findings may have potential implications for treatment, and early and more aggressive CVD screening for such at risk populations. Further studies are needed to examine the clinical impact of targeted therapy towards mid-normal TSH concentration.

Diabetes Mellitus and Glucose Metabolism

CLINICAL AND TRANSLATIONAL STUDIES IN DIABETES

Attitudes and Practice of Fasting Ramadan in Patients with Diabetes

Ali Al-Qarni, MD, FACP, FACE¹, Reem Mohammad Alamoudi, MD, MHSc, FACP², Salwa Al-Aidarous, MD, FRCP-UK, MME³, Awad Alshahrani, MD, FACE⁴, Munir Abuhelalah, MD, PhD⁵, Gasmelseed Ahmed, MD, MPH⁵.

¹King Abduaziz Hospital, King Abdullah International Medical Research Center (KAIMRC), King Saud Bin Abdulaziz University for Health Sciences, Ministry of National Guards Health Affairs, Alahsa, Saudi Arabia, ²Imam Abdulrahman bin Faisal Hospital, King Abdullah International Medical Research Center (KAIMRC), King Saud Bin Abdulaziz University for Health Sciences, Ministry of National Guards Health Affairs, Dammam, Saudi Arabia, ³King Abduaziz Medical City, King Saud Bin Abdulaziz University for Health Sciences, Ministry of National Guards Health Affairs, Jeddah, Saudi Arabia, ⁴King Abduaziz Medical City, King Saud Bin Abdulaziz University for Health Sciences, Ministry of National Guards Health Affairs, Riyadh, Saudi Arabia, ⁵King Abdullah International Medical Research Center (KAIMRC), Ministry of National Guards Health Affairs, Alahsa, Saudi Arabia.

MON-654

Background: Fasting Ramadan is practiced by Muslims globally. Compliance with health team advice on ability to fast or not, medication and lifestyle adjustments are the corner stone of achieving optimal diabetes control and avoiding complications with fasting. We aimed in this study to evaluate the attitudes and practice of Muslim patients with diabetes during fasting Ramadan, and to assess their compliance with the medical instructions provided by their healthcare team.

Methods: A cross-sectional study conducted in four Medical Centers under the Ministry of National Guard health affairs in four cities: Al-Ahsa, Dammam, Jeddah and Riyadh. All patients with diabetes followed in the diabetes clinics within three months post Ramadan and who met the study inclusion and exclusion criteria were approached and consented for participation in the study, and then filled a self-administered validated 15 items questionnaire.

Results: Data for 1438 diabetics were analyzed; 1207 (83.9%) T2DM and 231 (16.1%) T1DM. The mean age