Steven J Soldin, J Chromatogr Sep Tech 2017, 8:3(Suppl)
DOI: 10.4172/2157-7064-C1-025

The role of specificity in improving diagnosis and treatment of hypothyroidism and adrenal diseases

Steven J Soldin
National Institutes of Health (NIH), USA

Hypothyroidism affects around 5.5% of the population. Over the past 15 years, we have shown that accurate and precise measurement of thyroid hormones employing mass spectrometry instead of immunoassay alters the classification of 2/3 of the patients with subclinical hypothyroidism and >50% of patients with hypothyroidism. Our studies have also shown that results for FT4 and FT3 measured by tandem mass spectrometry agree far better with TSH or log TSH and the patient's clinical condition than FT4/FT3 measured by immunoassays. Also we show that measurement of FT3 and TT3 by immunoassay is unreliable, especially at low FT3/TT3. Adrenal hypo and hyper function occurs approximately in 7.3% of the population. Employing tandem mass spectrometry to measure a serum steroid profile, we have shown that 11-DOC and DHEA are superior to measuring cortisol after ACTH stimulation tests. Current practices require measurement of only cortisol and are clearly suboptimal. Also right and left adrenal vein catheterization allows identification of excessive production and whether it was unilateral or bilateral.

Biography

Steven Soldin is a Senior Scientist at National Institutes of Health (NIH), USA. He is also an Adjunct Full Professor at Georgetown University in Department of Endocrinology and Metabolism. He has published 271 papers. His research interests focus on "The role of specificity in improving patient diagnosis and treatment". He recently showed a statistically significant diurnal fluctuation in steroid concentrations for all steroids tested except progesterone". The extent of this diurnal variation is so large that it necessitates development of time dependent reference intervals. The role of mass spectrometry in improving patient diagnoses in hypothyroidism (5.7 % of population) and adrenal disease (7.4% of population) has been demonstrated.

sjs44@georgetown.edu

Notes: