a ratio elevated to 48.21 (<25), indicative of a defect in vitamin D degradation that potentially exacerbates oversupply of $1,25(OH)_2D$, mediated via its reduced metabolism. Genetic evaluation is in progress. After initiation of treatment with Rituximab, his serum calcium levels declined along with regression of his lymphoma. **Conclusion:** Although mutations in CYP24A1 are an uncommon cause of hypercalcemia, they should be considered in the differential diagnosis of elevated $1,25(OH)_2D$ levels without a clear source, as confirming this diagnosis strongly impacts treatment decisions and clinical outcome.

Cardiovascular Endocrinology

HYPERTRIGLYCERIDEMIA; INFLAMMATION AND MUSCLE METABOLISM IN OBESITY AND WEIGHT LOSS I

Association Between Baseline Fitness and Changes in Physical Activity and Weight Loss in an 18-Month Behavioral Weight Loss Program

Adnin Zaman, MD, Danielle M. Ostendorf, PhD, Zhaoxing Pan, PhD, Seth A. Creasy, PhD, Brian L. Stauffer, MD, Daniel H. Bessesen, MD, Holly R. Wyatt, MD, Edward L. Melanson, PhD, Victoria A. Catenacci, MD.
University of Colorado, Aurora, CO, USA.

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BACKGROUND: Baseline cardiovascular fitness may be a significant predictor of future success in a comprehensive behavioral weight loss program (BWLP). Yet, few studies have examined the association between baseline fitness and future weight loss.
PURPOSE: To determine the association between baseline fitness and changes in body weight and device-measured levels of moderate-to-vigorous physical activity (MVPA) during a BWLP.
METHODS: Adults (n=85) were enrolled in an 18-month BWLP combining a calorie-restricted diet, group-based behavioral support, and 6 months of supervised exercise (progressing to 300 min/wk of moderate-intensity) followed by 12 months of unsupervised exercise. Data from 60 completers (age 41.0±9.5 years, BMI 34.6±4.2 kg/m^2, 80% female) were used in this analysis. MVPA was measured over 1 week with the Sensewear Armband at months 0, 6, 12, and 18. Fitness (VO_2max) was measured on a treadmill using indirect calorimetry and categorized based on published age and sex norms (Physical Fitness Specialist Certification Manual, 1997). A linear mixed effects model with unstructured covariance was used to examine the association between baseline fitness category and changes in body weight, total MVPA, and MVPA in bouts ≥10 min at the four time points.
RESULTS: Of the 60 completers, 33% (n=20) were classified as having *very poor* fitness, 45% (n=27) *poor*, 18% (n=11) *fair*, 3% (n=2) *good*, and 0% (n=0) *excellent* or *superior*. Due to the low proportion of participants categorized as having *fair* or better fitness, we created a binary fitness variable (*very poor* vs. *poor or better*). Baseline BMI was higher in those in the *very poor* category compared to those in the *poor or better* category (36.2±4.2 vs 33.7±4.0, p=0.03). There were no significant differences between the two fitness categories in weight change at 6 or 12 months. However, at 18 months, mean weight loss was 4.3±1.7 kg in those in the *very poor* category and 8.2±1.2 kg in those in the *poor or better* category, with a marginally significant between-group difference (p=0.07). There were no differences in changes in total or bout MVPA. However, those with *very poor* fitness had lower bout MVPA at baseline vs. those with *poor or better* fitness (16±20 vs 33±31 min/d, p=0.03). At 18 months, both groups increased bout MVPA, however bout MVPA remained lower in the *very poor* vs. *poor or better* group (24±29 vs 42±29 min/d, p=0.03). Total MVPA showed a similar pattern.
CONCLUSION: Baseline fitness may moderate 18-month weight loss, as those with *very poor* fitness lost less weight compared to those with *poor or better* fitness levels. Those with *poor or better* fitness at baseline achieved significantly higher mean levels of MVPA at 18 months compared to those with very poor fitness. Participants with *very poor* fitness at baseline may require additional exercise support during a BWLP to achieve the high levels of MVPA recommended for weight loss maintenance.

Neuroendocrinology and Pituitary

NEUROENDOCRINE & PITUITARY PATHOLOGIES

Acute and Long Term Evaluation of Pituitary Functions in Patients with Advanced Heart Block Requiring Pacemaker Implantation: A Pilot Study

Arun Viswanath, MBBS, MD.
Sher-i-Kashmir Institute of Medical Sciences, Ramanathapuram, India.

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Abstract:
Background: Neuronal hypoxia and neuro-inflammation accompanying conditions like traumatic brain injury, stroke, cerebrovascular accidents and sub-arachnoid haemorrhage has been associated with hypopituitarism. Neuronal insults of similar magnitude and hypopituitarism [Growth Hormone (GH), gonadotropin and TSH deficiency in 27.2%, 9.0% and 2.2% patients respectively] has also been noted in a single study till date conducted in patients of ventricular arrhythmias requiring cardiopulmonary resuscitation1. Patients with heart block, a more frequent form of cardiac arrhythmia usually presents with haemodynamic compromise and may be predisposed for developing either acute or delayed hypopituitarism which has never been studied before.
Aims and objective: Our study was aimed at exploring whether pituitary dysfunction occurs in patients presenting with heart block and requiring pacemaker implantation. We analysed anterior pituitary functions in these cohort of patients during acute hospitalization and later during follow.
Study design: Cross sectional prospective study
Materials and Methods: Fifty-one patients were included in the study (mean age-65.98±10.9years; 34 men & 17 women). Pituitary hormonal profile was done within 48 hours of presentation and after a mean follow up of 12.52 ± 2.2 months. Total T3, total T4, free T4, TSH, FSH, LH, Testosterone (in men), Estradiol (in women), Prolactin, and random Cortisol were measured in all participants at baseline and in follow-up. Fixed dose Glucagon