

Her home doses of calcitriol and calcium were resumed. She was referred for total thyroidectomy as an outpatient once she became euthyroid. The confirmatory Western blot test for HIV was negative. It was determined that presence of thyroid stimulating immunoglobulin resulted in the false positive ELISA test.

Discussion: Hyperthyroidism with Graves disease seen in PHP has only very rarely been reported. (1) It has been postulated that abnormal electrolytes and elevated parathyroid hormone from PHP may lead to stimulation of the thyroid gland and perpetuate Graves disease symptoms. (2) Furthermore, the presentation of thyrotoxicosis despite TSH resistance in PHP indicates that there may be other mechanisms for TSH receptor antibodies to take effect in these patients which have not yet been determined. (3) Lastly, autoimmune diseases, including Graves disease, can cause a false-positive HIV ELISA as seen in our patient.

Conclusion: Although rare, thyrotoxicosis may present in patients with PHP1B. Additionally, it should be kept in mind that autoimmune diseases such as Graves disease can cause a false positive HIV ELISA, and follow-up Western blot testing should therefore be performed.

References:

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- (2) Morón-Díaz et al. 2019. A rare case of Graves' disease in a patient with type 1B pseudohypoparathyroidism and associated TSH resistance. *Endocrine Abstracts*. 63:96
- (3) Richard Prokesch. 2010. Navigating False Positive Testing. *HIV Specialist (AAHIVS)*. 2:27

Cardiovascular Endocrinology

PATHOPHYSIOLOGY OF CARDIOMETABOLIC DISEASE

Metabolic Effects of Cross-Hormone Treatments in Transgender Individuals in Taiwan

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Objective:

Many biological differences seen in men and women are driven by relative different level of estrogen and testosterone. Transgender individuals may need gender-affirming intervention like inhibiting of endogenous sex hormones or replenishing cross-hormone to induce physical change to stimulate their expressed or experienced gender. However, recent study has concluded that the incidences of acute cardiovascular events are higher in transwomen receiving transgender hormone therapy (1). Transgender therapy for adults with Testosterone in female to male (FtM); with Estrogen and anti-androgen in male to female (MtF) are frequently prescribed in Taiwan. The aim of this study is to investigate metabolic effects of an altered sex hormone profile on different gender.

Methods:

The study is a retrospective study conducted in a tertiary medical center in Northern Taiwan analyzing biological differences over time for 65 FtM and 45 MtF patients in

our endocrine out-patient department. The results from the exams are analyzed separately using paired t-test compared to baseline visit. The transgender individuals are examined at four time points; before the cross-hormone therapy, three, six, and twelve months following sex hormone treatment.

Results:

The primary outcome was that FtM patients showed significant increases in BMI (22.6 ± 0.3 v.s. 23.3 ± 0.4 kg/m²; $P < 0.001$; $t = 6M$), low density lipoprotein cholesterol (124 ± 3 vs. 131 ± 3 mg/dL; $P = 0.03$; $t = 12M$), creatinine (0.75 ± 0.01 vs. 0.83 ± 0.14 mg/dL; $P < 0.001$; $t = 12M$), and hemoglobin (13.5 ± 0.7 v.s. 15.2 ± 0.19 g/dL; $P < 0.001$; $t = 12M$) compared to the baseline; decreases of high density lipoprotein cholesterol (57 ± 2.1 v.s. 51 ± 2.0 mg/dL; < 0.001 ; $t = 12M$) was also revealed. Patients in MtF group disclosed declines in low density lipoprotein cholesterol (104 ± 3 v.s. 100 ± 3 mg/dL; $P = 0.05$; $t = 3M$), hemoglobin (14.0 ± 0.1 v.s. 13.5 ± 0.1 g/dL; $P = 0.008$; $t = 12M$), uric acid (5.3 ± 0.2 v.s. 4.7 ± 0.2 mg/dL; $P = 0.03$; $t = 12M$) and creatinine (0.82 ± 0.01 v.s. 0.79 ± 0.14 mg/dL; $P < 0.001$; $t = 6M$) compared to baseline data. In addition, most of these metabolic effects persisted the follow-up period.

Conclusion:

This observational study revealed the role of cross-hormone treatment in increasing relative cardiovascular risk in FtM transgender individuals.

Reference:

1. Nota, N. M., et al. (2019). "Occurrence of Acute Cardiovascular Events in Transgender Individuals Receiving Hormone Therapy: Results From a Large Cohort Study." *Circulation* 139(11): 1461-1462.

Nothing to Disclose: LYL, YHL, THW, YCL

Adipose Tissue, Appetite, and Obesity

RARE CAUSES AND CONDITIONS OF OBESITY: PRADER WILLI SYNDROME, LIPODYSTROPHY

U.S. Prevalence & Mortality of Prader-Willi Syndrome: A Population-Based Study of Medical Claims

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Prader-Willi syndrome (PWS) is a complex developmental genetic disorder associated with hypotonia, poor feeding in neonates, onset of hyperphagia in early childhood, and shorter overall life expectancy. Prior epidemiology studies of PWS have examined smaller populations, with limited research in a US population. The aim of this study was to provide a contemporary estimate of PWS prevalence and annual all-cause mortality in the US using a large administrative medical claims dataset.

Methods: PWS patients were identified between 2012-2014 via the presence of ≥ 2 claims with a diagnosis code for