

the possibility of a developmental trend in absolute NAA levels, as a measure of neuronal function. **Conclusion:** We found sex-typical ¹H-MRS spectra and they appear to be brain region specific. While the brain metabolite levels in trans men mostly resembled that of cis women, interesting findings such as modulation by age of onset warrant future enquiry to address potential neurobiological underpinnings of GD.

Reproductive Endocrinology TRANSGENDER CARE

Management of Recurrent Deep Vein Thrombosis in a Transgender Woman

Seda Hanife Oguz, MD¹, Yahya Buyukasik, MD², Bulent O. Yildiz, MD¹.

¹Division of Endocrinology and Metabolism, Department of Internal Medicine, Hacettepe University School of Medicine, Ankara, Turkey, ²Division of Hematology, Department of Internal Medicine, Hacettepe University School of Medicine, Ankara, Turkey.

Background: Transgender people using hormone treatment require lifelong medical care. Although cross-sex hormone treatment (CSHT) is usually considered safe, serious adverse events may occur. Here we report a case of deep vein thrombosis associated with estradiol treatment in an otherwise healthy young transgender woman. **Case Presentation:** A 21-year-old transgender woman using CSHT applied to our outpatient clinic with the complaint of painful swelling in her left leg. She was diagnosed with deep vein thrombosis (DVT) in the same leg one year earlier when she was admitted to the emergency room of another hospital with similar symptoms, and was given warfarin treatment for 3 months which has improved the symptoms. Three months after cessation of warfarin, symptoms re-occurred, but she was only able to apply to our clinic after another 3 months due to COVID-19 pandemic. Physical examination was unremarkable except asymmetrical swelling in the left leg. She has been receiving oral estradiol 6 mg/day and spironolactone 200 mg/day for 2 years. She denied taking estradiol in higher doses than recommended. She did not have any predisposing factors for DVT including obesity, immobilization and smoking. She had no prior history of venous thromboembolic events (VTE). Family history was also negative for thrombophilia except her uncle was diagnosed with ischemic cerebrovascular event at the age of 60. Lower extremity venous doppler ultrasonography revealed a thrombus in the left popliteal vein that caused total obstruction of blood flow to the distal. Plasma levels of d-dimer and fibrinogen were 0.35 mg/L and 262 mg/dL, respectively. Serum levels of sex hormones were estradiol: 204 pg/mL, total testosterone: 22.4 ng/dL, FSH: 0.22 mIU/mL, LH: 1.5 mIU/mL. Thrombophilia panel revealed a homozygous mutation in MTHFR (1296), and heterozygous mutations in both Factor V Leiden and plasma activator inhibitor (4G/5G). She was given enoxaparin in addition to warfarin until INR was elevated up to desired levels. Oral estradiol treatment was switched to transdermal route. Life-long anticoagulant treatment was suggested since

the thrombotic event was triggered by estradiol treatment which will be continued. **Conclusions:** Limited data are available on incidence and management of VTE associated with estradiol treatment in male-to-female individuals. As in general population, routine screening for thrombophilia is not recommended in transgender women prior to the initiation of CSHT if no personal or family history of VTE is present. Even in the absence of predisposing factors, life-long anticoagulant therapy may be considered since the VTE-provoking estradiol treatment will be continued. Switching the route of estradiol treatment from oral to transdermal may be beneficial.

Reproductive Endocrinology TRANSGENDER CARE

Muscle Strength in Transgender Women After Long-Term Hormone Therapy: A Cross-Sectional Study

Leonardo A.M Alvares, MD¹, Marcelo R. Santos, PhD², Francis Ribeiro Souza, PhD², Livia Marcela Santos, MD, MSc³, Henrique A. Ramos, Medical School Student³, Berenice Bilharinho Mendonca, MD¹, Maria-Janieire N. Nunes Alves, MD, PhD², Elaine Maria Frade Costa, MD, PhD¹, Sorahia Domenice, PhD¹.

¹Endocrinology Department of the University of Sao Paulo, Sao Paulo, Brazil, ²Heart Institute - FMUSP, Sao Paulo, Brazil,

³University Center Sao Camilo, Sao Paulo, Brazil.

Introduction: Cisgender women (CW) are usually weaker than cisgender men (CM), but when the strength is expressed in relation to the body weight (BW) or fat free mass (FFM) it is observed that the difference disappears what suggests that the innate qualities of the muscle and its motor control mechanisms are similar in CW and CM. The effects of prior exposure to testosterone during puberty on the performance of transgender women (TW) undergoing physical effort are not well known. **Objective:** To evaluate muscular strength of TW in long-term gender affirming hormone therapy (GAHT). **Methods:** A cross-sectional study was carried out with 8 TW (average age of 34.0 yo, SD ±4.8), 8 CM and 8 CW matched by age and body mass index (BMI). All TW were non-gonadectomized subjects and were in estrogen plus cyproterone acetate therapy (average time of 15.6 years (SD ±8.7) of treatment). Mean total testosterone (ng/dL) levels of TW, CW and CM were 83.5, 20.5 and 480.5 at the time of the study, respectively. Hemoglobin levels of TW, CW and CM were 14,2 (range 13,5-14,9), 14,35 (range 12,8-14,7) and 15,35 (range 14,0-18,2), respectively BC was assessed by InBody 720. Handgrip strength tests were carried out using the Stoelting hand-held hydraulic dynamometer. **Results:** The mean maximum strength was 31,9 kg (SD±2.4) in TW, 29,2 kg (SD±4.4) in CW, and 47,5 (SD±8.6) in CM (TWvs.CW p=0.0743; TWxCM p<0.0018; CWvsCM p<0.001). Free fat mass (FFM) of TW was 55.56±6.88 kg, CW 38.98±4,09 kg, CM 64,98±6,29 kg (TWvsCW p<0,0001; TWvsCM p=0,024; CWvsCM p<0,0001). In the evaluation Median Strength/FFM, a mean of 0.54 was observed in the TW group, and 0.76 in the CW and CM (TWvsCW p=0.0157 and TWvsCM p=0.036, CWvsCM p>0.9999). **Discussion:** The expression