pituitary-gonadal axis [FSH (N: 1-11 U/L): 2/21 (9%, 1 high, 1 low); LH (1-8 U/L): 1/21 (5%, 0 high, 1 low); total testosterone (N: 262-1593 ng/dL): 4/21 (19%, 0 high, 4 low)]; and growth hormone [3/21 (N: 0 - 3 ng/mL): (14.3%, 3 high, 0 low)]. Of the 28 observed BEAs, 17/28 (61%) were initially noted during cycle 1, 7/28 (25%) during cycle 2, and 4/28 (14%) during cycle 3, and 16/28 (57%) were noted within 48 hours of ^{177}Lu DOTATATE injection. There was no significant association between the standardized uptake values of adrenals (p=0.28), pituitary (p=0.75), and thyroid gland (p=0.61) on the baseline diagnostic ^{68}Ga DOTATATE scan and their respective BEAs. One patient developed overt hypothyroidism and was started on levothyroxine, and another patient developed central adrenal insufficiency likely from immunotherapy started after ^{177}Lu DOTATATE therapy. In all other patients, BEAs were transient and spontaneously resolved. Limitations included the observational nature of the study, lack of data on levels of IGF-1, parathyroid hormone, or hemoglobin A1C. **Conclusion:** ^{177}Lu DOTATATE therapy for metastatic PPGL is associated with biochemical abnormalities in endocrine function. Although mostly transient, there is a potential risk for BEAs to be permanent and to manifest clinically. Therefore, serial monitoring of abnormal hormonal values is necessary and treatment should be considered when appropriate. Studies on larger populations with long-term follow-up are necessary to further investigate the incidence of endocrine abnormalities with ^{177}Lu DOTATATE therapy.

Reproductive Endocrinology

TRANSGENDER MEDICINE AND RESEARCH

Gonadotropin Releasing Hormone (GnRH) Agonist Therapy Induces a Sustained Reduction in Plasma Testosterone Levels and Is Well Tolerated in Transwomen Veterans

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Gender affirming hormone therapy (GAHT) is the mainstay of long-term management of transgender individuals. In transwomen, treatment with physiologic doses of estrogen alone is often insufficient to suppress testosterone to the desired level. Although GnRH agonist therapy is usually prescribed for puberty suppression in trans youth, in adult transwomen, GnRH agonist may be added. The durability of long-term GnRH agonist in lowering testosterone as well as the long-term safety is not clear. We examined the effect of leuprolide a GnRH agonist, on testosterone as well as clinical and metabolic features in transwomen Veterans. Out of 91 subjects with gender dysphoria followed at a VA Endocrinology clinic, 65 were transwomen (age 49 ± 3 years) who had a detailed clinical, biochemical and hormonal profile (lipid profile, HbA_{1C}, FPG, testosterone, estradiol). We performed a retrospective cohort study of the 31 (48%) transwomen on Leuprolide (3.375mg q month) and 33 transwomen who were not on Leuprolide. Plasma testosterone, lipid profile, were analyzed before, 6 months, 1 year and at the last follow-up visit. The median follow-up of subjects on Leuprolide was 2.7 (1.7-3.8) years. Plasma testosterone concentration declined by 89% from 432±32 ng/dl to 47±9 ng/dl within 3-6 months after initiation of GnRH agonist treatment. Plasma testosterone remained persistently low 39±4ng/dl at 1 year and at the end of 2.7 yrs, most subjects on Leurprolide had plasma testosterone concentration <50ng/dl. Leuprolide therapy led to similar rapid decline in testosterone concentration in both younger (<40yrs) or relatively older (>50yr) transwomen. Leuprolide was in general well tolerated requiring discontinuation in just one patient due to severe fatigue. Three subjects (10%) experienced hot flashes which did not lead to discontinuation of medication. In the non-Leuprolide group, of 33 subjects, the follow-up was relatively inconsistent and only 12 subjects were regularly followed throughout a year with stable treatment. The decline in plasma testosterone was of a lower magnitude versus the leuprolide group (55% vs 89%, p <0.05). The testosterone levels declined from 393±42 to 180±44 ng/dl at 6 months. Body weight, and lipid profile: triglyceride, and plasma HDL concentration did not change significantly with or without GnRH agonist therapy. In conclusion, GnRH agonist therapy led to a sustained suppression of plasma testosterone levels in transwomen and was not associated with worsening lipid profile, was effective, and well tolerated in transwomen regardless of their age and may be considered an adjunct to the ant-androgen and estrogen therapy.

Bone and Mineral Metabolism

BONE DISEASE FROM BENCH TO BEDSIDE

Changes in Bone and Glucose Metabolism in Patients Post Solid Organ Transplant

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Introduction:

Solid organ transplantation has emerged as a pivotal therapeutic option for various organ failures and has gained more popularity with newer technologies and better immunosuppressive options.

However, immunosuppressive therapies for survival of solid organ transplant is also associated with various metabolic complications with changes in bone and glucose metabolism.

The aim of our study is to review the changes in bone and glucose metabolism in post solid organ transplant recipient Veterans.

Methods:

Single center, retrospective study with subjects who had solid organ transplant conducted at William Jennings Bryan Dorn Veteran Hospital in Columbia, South Carolina. All available subjects who had solid organ transplant between January 1, 2008 till December 31st, 2017 and had at least one post-transplant followed up visit were included. Data was collected from computerized patient record system after approval by Institutional Review board (IRB) and Research and development. Collected data included

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