microprolactinomas (<1 cm), macroprolactinomas (>1cm) and giant prolactinomas (>4 cm). The clinical presentation of these tumors might differ from age, sex and size. Dopamine agonists, such as cabergoline or bromocriptine, have become the first line of treatment, since these agents decrease tumor size and prolactin (PRL) secretion. In Mexico, recent studies have focused on giant prolactinomas but there is missing data of the clinical and biochemical manifestations of the tumor size-effect within the three types of prolactinomas in our population. **Objective:** To determine the effect of the tumor size in the clinical and biochemical presentation, and the follow up in prolactinomas. **Methods:** This an observational, retrospective, retrolective study. **Results:** Patients were classified according to their tumor size and 489 patients with confirmed diagnosis of prolactinoma were included. The mean age was 36+-12 years old and 86% were women. The size was different among sex with 14 (2.9%) and 259 (52.9%) patients with microprolactinoma and 34 (6.9) and 152 (31.1%) with macroprolactinoma in men and women, respectively (p <0.001). The median PRL levels were higher among patients with bigger tumors, 115 (97-150) ng/mL for microprolactinomas, 219 (115-777) ng/mL for macroprolactinomas and 2000 (154-4000) ng/m for giant prolactinomas (p <0.001). Clinically, hypogonadism was more prevalent in women with bigger tumor size (p <0.001), as well as visual defects (p <0.001) and headache (p 0.008). **Conclusion:** The tumor size of prolactinomas affects the clinical and biochemical presentation as well as the years of follow up required.

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Reproductive Endocrinology

FEMALE REPRODUCTION: BASIC MECHANISMS

The Effect of GNRHR Autoantibody on Reproduction Function and Insulin Signaling Intermediates in a New Animal Model of Polycystic Ovary Syndrome

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MON-002

Background: Polycystic ovary syndrome (PCOS), a metabolic and reproductive associated disease, defined as hyperandrogenism with reproductive dysfunction including menstrual disorder, anovulation, infertility, polycystic ovary and so on. We previously showed reported a high percentage of activating autoantibodies (AAb) directed toward the second extracellular loop (ECL2) of gonadotropin-releasing hormone receptor (GnRHR) in PCOS patients, and further demonstrated elevated GnRHR-autoantibody (GnRHR-AAb) could induced insulin resistance in energy storage and peripheral tissue in immunized animals. In the present study, we have now induced specific GnRHR-ECL2 AAb in rats and explored the underlying mechanisms of their resultant reproductive dysfunction. Methods: Sixteen SD rats were randomly divided into 2 groups: a GnRHR group (n=8) and a control group (n=8). Rats in the GnRHR group were immunized with GnRHR ECL2 peptide while the controls were not. Epitope mapping of GnRHR-ECL2-directed AAb was performed using octapeptide multipin solid-phase peptides. Rat estrus cycle was measured through pudendum appearance and vaginal smears. Ovarian and pituitary tissues were collected to observe ovarian morphological changes, to examine the expressions of proteins and genes of insulin signaling pathway by Quantitative real-time PCR respectively. The concentration of inflammatory cytokines in the ovary was detected by Bioplex Pro™ magnetic bead-based assays on the Bio-plex®. Results: The GnRHR-AAb titers and activity in the GnRHR group were significantly higher than the control group, and the GnRHR-AAb from the immunized rats reacted predominantly with the peptide sequence FSQCVTHC of the GnRHR-ECL2. Numbers of LH pulses and concentration of testosterone in GnRHR group were significantly higher than control group. The GnRHR group exhibited lower frequency of in the appearance of proestrus and estrous phases while the control group represented had a higher frequency in the appearance of metestrus and diestrus stages on estrus cyclicity. The GnRHR-immunized group showed demonstrated increased atretic follicles, decreased corpora lutea, loosely packed granulosa cells, and thecal cell hyperplasia in ovarian tissue compared with controls group. There was GnRHR group represented increased expressions of IRS-1, PI3K and GLUT-1 in ovarian and pituitary tissues compared with control group. However, no obvious changes of inflammatory cytokines are observed in ovarian tissues between two groups. Conclusion: Chronic elevated GnRHR-AAb exerts induced reproductive dysfunction through increased ovarian LH secretion and androgen production, thus likely leading to compensatory hyperinsulinemia which ultimately enhanced insulin signaling in reproductive tissues to exert more and androgen production to, which may provide a novel etiological mechanism for PCOS.

Bone and Mineral Metabolism

BONE AND MINERAL CASE REPORTS I

Posterior Reversible Encephalopathy Syndrome Associated with Malignant Hypercalcemia and Hypertension Due to Primary Hyperparathyroidism

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SAT-378

Posterior Reversible Encephalopathy Syndrome associated with malignant hypercalcemia and hypertension due to primary hyperparathyroidism

Background

Posterior Reversible Encephalopathy Syndrome (PRES) is an acute neurological entity characterized by headache, altered mental status, visual loss and seizures. It can be