OMP withdrawal predictively causes flow, we found no evidence it improved women's cycle-related experiences nor decreased acne and hirsutism. Women-reported data on Cyclic OMP for improving androgenic PCOS cycle regularity, daily experiences and risks for endometrial cancer are needed.

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Adipose Tissue, Appetite, and Obesity

OBESITY TREATMENT: GUT HORMONES, DRUG THERAPY, BARIATRIC SURGERY AND DIET

5-Year Data of an Aggressive Pharmacological Approach to Moderate and Morbid Obesity: Is Prevention of Bariatric Surgery Feasible in the Long Run?

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Background: Maintenance of weight loss in patients that undergo weight loss interventions is highly challenging, irrespective of the type of approach to obesity (whether surgical, pharmacological, or non-pharmacological). We proposed a protocol of an aggressive clinical treatment for obesity aiming to prevent the need of bariatric surgery, in patients unwilling to undergo this procedure, by proposing a protocol that included the combination of different anti-obesity medications and non-pharmacological modalities, for longer duration, and with an active approach to prevent weight regain. Our initial 2-year data showed that 93% (40 of 43 patients) with moderate and morbid obesity were able to avoid the need of bariatric surgery, with concomitant improvements of the biochemical profile. However, whether these patients would maintain their successful rates after five years was uncertain. Our objective is to describe the efficacy and safety of a long term (5-year data) pharmacological and multi-modal treatment for moderate and severe obesity. **Methods:** The 40 patients that were successful in the two-year approach in our obesity center (Corpometria Institute, Brasilia, DF, Brazil) were enrolled. A long-term anti-obesity protocol was employed, with continuous or intermittent use of anti-obesity drugs, trimestral body composition analysis, psychotherapy, visit to a nutritionist every four months, and both resistance and endurance exercises at least four times a week. Body weight (BW), total weight excess (TWE), body fat, markers of lipid and glucose metabolism, liver function, and inflammation were analyzed. Subjects that dropped out were considered as weight regain. Therapeutic success for the 5-year follow-up included as the maintenance of >20% loss of the initial BW loss, and no weight regain (or < 20% of the initial weight loss). **Results:** A total of 27 patients (67.5%) were able to maintain the body weight, seven dropped out, and six regained more than 20% of the initial weight loss. Of these, 21 (77.8%) had significant further increase of muscle mass and decrease of fat loss, while 17 (63.0%) had further weight loss ($p < 0.05$), compared to the 2-year data. Improvements on the biochemical profile persisted in all 27 patients, and had significant further improvements in 24 (88.9%) of these patients. **Conclusion:** The risk of weight regain five years after a weight loss treatment for obesity was significantly lower compared to previous literature, and comparable to the long-term outcomes of bariatric procedures. An aggressive, structured, and long-term clinical weight loss approach has been shown to be feasible, even for morbidly obese patients.

Neuroendocrinology and Pituitary

ADVANCES IN NEUROENDOCRINOLOGY

Steroid and Sex Specific Responses of Neural Stem Cells to Prenatal Dexamethasone versus Betamethasone Administration

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Synthetic glucocorticoids (sGCs) are widely administered to pregnant women for their anti-inflammatory, immunosuppressive and organ maturation properties. Worldwide, Dexamethasone (Dex) and Betamethasone (Beta) are the two most commonly administered prenatal sGCs to reduce morbidity and mortality associated with respiratory distress, intraventricular hemorrhage and necrotizing enterocolitis. Preterm administration of sGCs is associated with reduced birthweight and increased risk for hypertension, cardiovascular, metabolic, and neurological problems later in life. Adverse neurological outcome has been shown to depend on the type of sGCs used, the dose, timing of sGCs administration and sex. We have previously shown that the glucocorticoid receptor (GR) is expressed in the developing brain in stem and progenitor cells, neurons and glia from early developmental stages, and that prenatal Dex alters neural stem cell (NSC) biology and the developmental trajectory of the cerebral cortex, hypothalamus and adult behavior. To identify the molecular and cellular basis of the sex and steroid specific responses in the developing brain, we compared the consequence of Dex versus Beta exposure on embryonic cerebral cortical NSC biology. Murine NSC were isolated from the E14.5 cerebral cortex and exposed to 10-7 M Dex, 10-7 M Beta, or Vehicle for 4 or 24 hours and the immediate and long-term impact on transcription, proliferation and neuronal, glial and oligodendrocyte differentiation examined. Affymetrix complete genome transcriptional analyses reveal sex specific responses to Dex versus Beta within 4 hours. At >+/-1.5-fold change 548 genes were differentially regulated by Dex, 452 by Beta and 256 were altered by both Dex and Beta ($P < 0.05$). Distinct sex specific responses to Dex versus Beta were observed. At >+/-2-fold change 126 genes were significantly different in the Dex versus Beta female transcriptome, 146 in the male transcriptome with 18 genes unique to both male