scores on all three indices represent stronger olfactory performance. We also measured fasting serum PYY; severity of A/R eating on the Pica, ARFID and Rumination Disorder Interview (PARDI); and food fussiness as a measure of food-related sensory sensitivity on the Adult Eating Behavior Questionnaire. Statistical analyses included T-test and spearman's correlations. **Results:** Greater fasting serum PYY levels were associated with significantly poorer performance on the odor threshold test (r=-0.4, p=0.003). Greater severity of A/R eating (r=-0.3 p=0.008) and food fussiness (r=-0.2, p=0.03) were both associated with significantly poorer performance on the odor discrimination test. **Conclusions:** As predicted, we found that higher levels of PYY were associated with poorer olfactory performance in youth with full and subthreshold ARFID. However, contrary to hypotheses, we found that greater food fussiness and severity of A/R eating were associated with poorer olfactory performance. Future research should investigate whether high levels of PYY and poor olfactory performance are causes, consequences, or correlates of A/R eating.

Neuroendocrinology and Pituitary

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Oxytocin Levels in Response to Pituitary Provocation Tests in Healthy Volunteers

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Background: Oxytocin, secreted into the circulation through the posterior pituitary, regulates lactation, weight, and socio-behavioral functioning. Oxytocin deficiency has been suggested in patients with hypopituitarism, however, diagnostic testing for oxytocin deficiency has not been developed. Known stimuli used in the diagnosis of pituitary deficiencies - the hypertonic saline and arginine infusion tests stimulating copeptin levels, and the oral macimorelin test stimulating growth hormone levels - have also been shown to stimulate oxytocin secretion in animal models. We hypothesized that these provocation tests would stimulate plasma oxytocin levels in humans.
Methods: Basal plasma oxytocin levels were measured for all three tests. Stimulated plasma oxytocin was measured once plasma sodium >150 mmol/l for the hypertonic saline and after 45 minutes for the arginine infusion and the oral macimorelin test, expected peak of copeptin and growth hormone levels, respectively. Primary outcome was change between basal and stimulated oxytocin levels using a paired t-test.
Results: Median (IQR) age of all participants was 24 years (22, 28), 51% were female. As expected, copeptin increased in response to hypertonic saline from 4.0 pmol/L [3.3, 6.7] to 34.2 pmol/L [23.2, 45.4] (p-value <0.001) and in response to arginine infusion from 4.6 pmol/L [3.2, 6.2] to 8.3 pmol/L [6.4, 10.8] (p-value <0.001). Growth hormone increased in response to oral macimorelin from 1.6 ng/mL [0.3, 17.2] to 106.0 ng/mL [73.3, 127.2] (p-value <0.001). Oxytocin levels increased in response to hypertonic saline infusion from 0.3 pg/mL [0.3, 0.5] to 0.6 pg/mL [0.4, 0.7] (p-value 0.007), while there was no change in response to arginine infusion (basal 0.4 pg/mL [0.4, 0.6], stimulated 0.4 pg/mL [0.3, 0.6], p-value 0.6), nor to oral macimorelin (basal 38.7 pg/mL [31.1, 66.9], stimulated 34.2 pg/mL [31.2, 48.2], p-value 0.3).
Conclusion: We found that hypertonic saline infusion results in doubling of oxytocin levels. Further research will be important to determine whether this test could be used diagnostically to identify patients with oxytocin deficiency. In contrast to animal data, arginine and macimorelin did not stimulate oxytocin.

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Pituitary Stalk Lesions - Single Center Long Term Observation

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Background & Methods: Pituitary stalk lesions (PSL) are various changes located in the pituitary infundibulum. The underlying pathology and exact diagnosis are difficult to establish due to their unique anatomical locus. A retrospective observational analysis of 60 adult patients (34W/26M) with pituitary lesions was performed. The mean age of diagnosis was 33.8 years (SD 23.7). The etiologies were divided into 3 groups (congenital, inflammatory, neoplastic), classified as exact, probable or unknown and characterized hormonally.
Aim: To present the etiological spectrum of pituitary stalk lesions and their clinical and hormonal characteristics on the basis of long term observation in the pediatric/adult endocrinology departments of our university. **Results:** The most common causes of PSL were neoplasms (20/60, 33.3%, 14W/6M); congenital malformations were detected in 17/60 (28.3%, 6W/11M), while inflammatory etiology was found in 15/60 (25.0%, 9W/6M) of patients. The exact diagnosis was established in 26/60 (43.3%) cases (16 congenital malformations, 6 adenomas, 1 pituitary cancer, 1 craniopharyngioma, 1 germinoma and 1 lymphocytic hypophysitis [LH]). The probable cause was suggested in