16.0±0.6 years; 98.6±0.4 BMI%ile) adolescents. BMI%ile was different between groups (p=0.04), but age of menarche, free testosterone and hirsutism severity were not. Hepatic markers of insulin resistance were worse in Hispanic youth, including lower sex hormone binding globulin and TG/HDL ratio (p<0.001), although HOMA-IR was worst in NHB (p=0.009) and Hispanic (p=0.036) compared to NHW youth. There were no significant differences in insulin concentrations—either fasting or during the OGTT—although fasting C-peptide was higher in Hispanic (p=0.008) compared to NHW youth. Fasting and 2-hour glucose concentrations were not different between groups. HbA1c was highest in NHB (5.7±0.4%, p<0.001 vs. NHW, p=0.026 vs. Hispanic), then Hispanic (5.5±0.3, p<0.001 vs. NHW), then NHW (5.2±0.3) youth. Fasting triglycerides differed between groups (p=0.029), being highest in Hispanic youth (129 [105,167] mg/dL). The frequency of hepatic steatosis (NHW 42%, Hispanic 62% NHB 25%, p=0.032) and the metabolic syndrome components HDL <40 mg/dL (NHW 61%, Hispanic 82% NHB 50%, p<0.001) and HbA1c 5.7-6.4% (NHW 5%, Hispanic 36% NHB 50%, p<0.001) were different between the groups. **Conclusions**: Adolescents with PCOS appear to show similar racial and ethnic variation to the general population in terms of metabolic disease components.

Neuroendocrinology and Pituitary

CASE REPORTS IN UNUSUAL PATHOLOGIES IN THE PITUITARY II

Xanthogranulomatous Hypophysitis: A Rare Case of Hypopoituitarism

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MON-251

The patient is a 54-year-old male with type 2 diabetic treated with insulin who presented with a two-week history of fever nausea and vomiting. He subsequently developed seizure episodes with changes in mental status prompting a visit to the emergency room. Upon admission the patient was hypotensive and lethargic. After an initial improvement, he developed polyuria (14-15 liters per day) in the context of eunatremia and specific gravity of 1010. His initial evaluation revealed a serum a.m. cortisol of 1.2 mcg/dL (6.2 to 19.4), low free T4 of 0.64 Ng/dl) 0.9-1.7) and secondary hypogonadism with a total testosterone of less than 2.5 ng/dL (181-772). Hormonal replacement was initiated. MRI of the brain revealed heterogeneous sellar lesion measuring 2.1 x 2.0 x 2.0 cm with peripheral enhancement following contrast administration and deviation of the pituitary stalk to the right. The lesion invaded the left cavernous sinus (Knosp III) and abutted the optic chiasm. He underwent an uneventful transsphenoidal tumorectomy revealing extensive coagulation necrosis with chronic lymphocytic infiltration, numerous macrophages and multinucleated giant cells with deposits of hemosiderin, cellular debris and isolated cholesterol crystals surrounded by granulomatous tissue. The pathology was compatible with xanthogranulomatous hypophysitis. We report a rare case of Xanthogranulomatous hypophysitis (XGH), the least common subtype of pituitary hypophysitis often mistaken by a neoplastic lesion. It is more common in young adults occurring in isolation, as a secondary reaction to a local process such as apoplexy part or as part of a systemic condition with autoimmune aetiology, often resulting in variable degrees of anterior and posterior pituitary deficiencies.

Adrenal

ADRENAL - TUMORS

SAMD9 (Sterile Alpha Motif Domain-Containing 9) Expression in Adrenocortical Tumors

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SAT-173

Introduction: *SAMD9* variants are associated with colon, breast and lung tumors. *SAMD9* mutations result in adrenal hypoplasia, suggesting its importance in adrenal development. We investigated the contribution of abnormal expression of *SAMD9* and its homologous, *SAMD9L*, to the pathogenesis of pediatric adrenocortical tumors (pACT) **Objective**: To evaluate the involvement of SAMD9 and SAMD9L in normal human adrenal cortex development and adrenocortical tumorigenesis, as well as to evaluate their association with tumor presentation and patient outcome. **Methods**: pACT samples (n= 72), normal pediatric adrenal cortices (n= 11), and normal fetal and post-natal adrenals (20 weeks of gestation to 10 years of age; n= 51) were enrolled. Protein expression of SAMD9 (immunohistochemistry) and *SAMD9/SAMD9L* mRNA levels were evaluated (qPCR). The associations between SAMD9/SAMD9L expression in pACT with tumor presentation (P53 p.R337H genotype and metastasis occurrence) and patient outcome (Overall (OS) and Disease-Free Survival) were analyzed. *In silico*, publicly available data from pediatric patients with ACT available in the Gene Expression Omnibus were used to evaluate the aforementioned associations with *SAMD9* (GSE76021) and *SAMD9L* (GSE76019) mRNA levels. *In vitro*, SAMD9 subcellular localization pattern was investigated in the ACT cell line NCI-H295R (immunofluorescence). **Results**: Nuclear and cytoplasmic SAMD9 expression was observed throughout all different phases of adrenal development evaluated. However, in pACT samples, 26% presented