Kiss1 (~35%) and NKB (~40%) compared to saline-treated animals; the abundance of Dyn mRNA did not differ between treatments. These data demonstrate that PVN UCN2 cells are activated during metabolic stress and that UCN2 is sufficient to suppress LH secretion and the expression of genes involved in stimulating LH pulses. These data support the hypothesis that UCN2 released from neurons in the PVN impairs KNDy cell function and LH secretion during acute stress.

Adrenal
TRANSLATIONAL STUDIES ON ADRENOCORTICAL FUNCTION IN HEALTH AND DISEASE
Luteinizing Hormone/Human Chorionic Gonadotropin Receptor Protein Expression in Adrenocortical Progenitor Cells, Aldosterone Producing Cell Clusters and Adrenal Adenomas Derived from Postmenopausal Women
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Results
Expression of LH/hCG-R was demonstrated in both normal and adrenomatous tissues in all 23 specimens. The staining in adenomas was heterogeneous, with clusters of densely stained LH/hCG-R positive cells in all specimens. There were less densely stained clusters in normal adjacent adrenocortical tissue that was most prominent in the subcapsular, zona glomerulosa region, an area where the putative adrenal cortical stem cells are found as well as the zona reticularis. Double staining for the stem cell marker DLK1 and LH/hCG-R confirmed that these cells represent adrenocortical progenitor cells. CYP 11B2 immunohistochemistry of normal adrenals demonstrated cell foci dipping from the capsule into the zona fasciculata classified as APCCs that co-expressed cytoplasmic LH/hCGR.

Conclusion
Adrenal adenomas and APCCs derived from postmenopausal women exhibited heterogeneous but strong immunohistochemical expression of LH/hCG-R in all samples. Interestingly, DLK1-positive adrenocortical stem cells in the subcapsular zone also expressed LH/hCG-R. These data may provide insights into the female predominance of adrenal pathologies, particularly in postmenopausal women with high LH levels. The LH/hCG-R may be a viable target for treatment of adrenal adenomas in postmenopausal women.

Neuroendocrinology and Pituitary
CASE REPORTS IN SECRETORY PITUITARY PATHOLOGIES, THEIR TREATMENTS AND OUTCOMES
New Diagnosis of Acromegaly with DKA as Initial Presentation
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SAT-251
Background: While diabetes mellitus from growth hormone related insulin resistance is not uncommon in GH secreting tumors, initial presentation with diabetic ketoacidosis is rare.

Clinical Case: 31 YO male with no significant past medical history presented with c/o fatigue, 40 lb weight loss, polyuria, polydipsia. Clinical features of acromegaly with frontal bossing, protruding jaw, large hands and feet, thick spade like fingers, hammer toes, high arches and thickened fat pads on both feet were noted. Initial labs were consistent with DKA with anion of 31 mmol/L (0-20), blood glucose 241 mg/dl, bicarb 12 mmol/L (22-29), serum betahydroxy butyrate > 8 mmol/L (0-0.29), urine positive for glucose, ketones, protein. Patient was initially treated with IV insulin per DKA protocol, transitioned to subcutaneous insulin.

MRI brain showed 2.1x1.3x2.1 cm pituitary macro adenoma. Labs showed elevated IGF1 LC/MS, S 1094 ng/ml (54-310), IGFBP3 14 mcg/ml (3-5-7), Z score IGF MS Mayo > 3 (-2 to +2), normal FSH 7.1 m unit/ml (1.5-12.4), normal LH 3.4 m unit/ml (1.7-8.6), normal prolactin 6 ng/
ml (4-15), normal ACTH 10 pg/ml, cortisol 13.4 mcg/dl, low total testosterone 48.2 ng/dl (193-836), normal free testosterone 7.92 ng/dl (4.85-19), normal TSH 1.55 mc unit/ml (0.27-4.2) and free T4 1.17 ng/dl (0.95-1.7). The patient was discharged home on 120+ units of total daily dose of insulin, after initial hospital admission. He underwent trans sphenoidal resection of pituitary macro adenoma one month after his initial presentation. Surgical pathology confirmed growth hormone producing adenoma. He was successfully weaned off from insulin in one month following surgery.

Conclusion: DKA is an unusual initial presentation of growth hormone producing tumors. As more cases are being reported it is important to be vigilant to look for DKA presentation in these patients and adjust/wean patients insulin once the growth hormone producing tumor is treated either with surgery or medications.

Diabetes Mellitus and Glucose Metabolism

CLINICAL AND TRANSLATIONAL GLUCOSE METABOLISM AND DIABETES

Degree of Diabetes Control Determines the Admission Severity of Diabetic Ketoacidosis
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MON-614

Objectives: To determine whether the degree of diabetes control correlates with the admission severity of diabetic ketoacidosis (DKA).

Methods: A Retrospective chart review was performed for patients admitted with DKA to the medical ICU at Abington Memorial Hospital between January 1, 2017 and January 1, 2018. Laboratory Data required to determine an acute physiology and chronic health evaluation (APACHE) score, hemoglobin A1C, length of hospital stay was recorded. The APACHE score was used to determine the severity of disease at admission. Patients were divided into two groups: low severity (APACHE <15) and high severity (APACHE >15).

Results: A total of 50 patients were included in the analysis. The mean age of the patients was 47 yrs (range 17-85 yrs). 52%(n=26) of the population were males. The overall mean APACHE II at admission was 15 (range 3-28). The low severity group (APACHE <=15) and high severity group (APACHE >15) were equally matched at 25 patients each. The mean APACHE scores were 9.9 and 18.7 for the low and high severity groups respectively. The mean hemoglobin A1C values for the low and high severity groups were 10.5 and 15 respectively. The average length of ICU/hospital stay was 1.63/6.5 and 1.54/3.61 days for the low and high severity groups respectively.

Conclusions: According to our study, a higher severity of DKA (higher APACHE) was associated with a higher