and transaminases, and normocytic anemia. Hepatitis panel, vitamin B12, ammonia, urinalysis and ultrasound of the appendix and gallbladder were unremarkable. She was treated with intravenous fluids and potassium. Electrolyte abnormalities and renal dysfunction resolved. On hospital day three, she became lethargic, tachycardic, unable to follow commands, and exhibited nystagmus and clonus. Thyroid studies showed TSH 0.06 uIU/mL (0.34 - 5.66 μIU/mL), and free T4 3.59 ng/dL (0.52 - 1.21 ng/dL). Methimazole and propranolol were started while awaiting repeat thyroid studies. MRI brain was not obtained due to aspiration risk. EEG showed diffuse slowing but no epileptiform activity. She returned to baseline mentation within hours of intravenous thiamine, with resolution of dysphagia and nystagmus. Thiamine level returned low (51 nmol/l; normal 67–200 nmol/L). Methimazole and propranolol were stopped and thyroid function tests normalized. She was discharged and delivered a healthy baby at term. Conclusion: WE is an acute neuropsychiatric condition caused by thiamine deficiency. Early recognition and treatment are critical to prevent irreversible damage; the classic signs are ataxia, ophthalmoplegia, and encephalopathy. Historically considered in patients with a history of alcohol use, WE is increasingly recognized in other conditions associated with dietary deficiency, since body stores of thiamine last only 18 days. WE has been reported in HG due to prolonged vomiting and increased thiamine requirements in pregnancy. WE has been associated with thyrotoxicosis, possibly due to increased metabolic demands. Both gestational transient thyrotoxicosis and HG are associated with markedly elevated HCG and present in the first 16 weeks of pregnancy. Initial thyroid studies were concerning for thyrotoxicosis, but normal repeat studies argue against that as a contributor. WE is a life threatening complication of poor oral intake, which should be empirically treated with thiamine prior to glucose. WE may be associated with thyrotoxicosis.

Healthcare Delivery and Education
EXEMPLARY CLINICAL CONSIDERATIONS FOR PATIENT TESTING AND CARE
Improving Medication Adherence in Pediatric Patients
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MON-128
Introduction Caring for chronic pediatric endocrine disorders commonly require long-term use of pharmacotherapy. Although these medications are effective in combating disease, their real benefits are often not achieved because of non-adherence. Health care professionals must be aware to the high prevalence of noncompliance which contributes to increased morbidity and medical complications, poorer quality of life and an overuse of the health care system and increase health care costs. Methods In order to better understand the factors contributing to noncompliance in our patient population, we performed a cross-sectional study along with medical chart review. We randomly selected 30 endocrine charts with chronic disorders and reviewed documentation of the need for medications, type of the visit, dose, duration, plan, patient compliance and refill follow up. Special attention was made if the physicians documented discussing the possible side-effects of the medication. An anonymous survey was handed to the parents at the end of visit and form was dropped in a locked box. No personal information or identification was collected. Parents were inquired about their understanding of the need for medication, side effects, compliance and the reason for poor compliance if they met the criteria. The chart reviewed showed that 47% of the patients reported poor compliance to physician during visit but when asked during the survey only 22% reported poor compliance. 58% of the patients reported not knowing the possible side-effects of the medications. Reasons for non-compliance given by patients were 58% concerned about side effects of medication, refill not provided 4.8%, forgetting to take medication 2.4%, cost 2.4%, and language barrier 2.4%. Other 30% didn’t provide a specific reason for poor compliance. Conclusion Rates of medication adherence in pediatric patient with chronic medical illness range from 11% to 93%, with an estimated average of around 50%. Our population compliance correlates with the national average for pediatric population compliance. Our study also highlighted the importance of discussing possible side-effects with patients. Reviewing it periodically during clinic visits may decrease the risk of non-compliance. 58% of our patients reported lack of knowledge of proper side-effects of the treatment and impact of non-compliance to disease progression. Based on these results, we provided additional resources to physicians to better screen for factors that may affect compliance in each visit. Certain hard stops were added in medical documents and modifications were done in EMR. Information about common endocrine conditions and medication was added in EMR in English and Spanish. Physicians were encouraged to given written information about the proper use and side-effects. We are planning to do a follow up survey in 3–4 months to evaluate the improvement.

Bone and Mineral Metabolism
BONE AND MINERAL CASE REPORTS I
Brown Tumor of the Mandible in Severe Uncontrolled Primary Hyperparathyroidism
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SAT-364
Background: Brown tumors are a part of the complex “osteitis fibrosa cystica” which is a diffuse resorptive process of the bone resulting from uncontrolled hyperparathyroidism. Although these brown tumors were fairly common in the past1, the incidence of brown tumors is now extremely rare in the United States due to early diagnosis and treatment of hyperparathyroidism. Here we describe an unusual presentation for osteitis fibrosa cystica.

Clinical Case: A 38 year old woman was admitted to the hospital with rapidly growing facial swelling in June 2019. The swelling initially appeared in January 2019 and had rapidly increased in size since April 2019. The mass was malodorous, painful and interfered with oral intake. The patient smoked 1 pack per day for 13 years. A CT scan of the head and neck with contrast showed a 3.6 x 4.5 x 3.3 cm mass. The swelling initially appeared in January 2019 and had rapidly increased in size since April 2019. The mass was malodorous, painful and interfered with oral intake. The patient smoked 1 pack per day for 13 years. A CT scan of the head and neck with contrast showed a 3.6 x 4.5 x 3.3 cm mass.
Reproductive Endocrinology

SEX DETERMINATION AND REPRODUCTIVE AXIS DEVELOPMENT

A Role for GnRH-II in the Control of Puberty?

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SUN-035

Hypothalamic gonadotropin-releasing hormone (GnRH) neurons represent the primary neuroendocrine link between the brain and the reproductive system. Although they play a key role in stimulating the release of FSH and LH from the anterior pituitary gland, the underlying mechanism by which they trigger the onset of puberty is unclear. To address this issue, RT-PCR, in situ hybridization histochemistry, and Affymetrix gene arrays were used to profile hypothalamic GnRH gene expression in prepubertal and adult rhesus macaques (Macaca mulatta). Like humans, these nonhuman primates express two molecular forms of GnRH (GnRH-I and GnRH-II), both of which are highly effective at stimulating gonadotropin release via the same GnRHR1 receptor. However, only GnRH-II shows increased hypothalamic expression in the presence of elevated estrogen concentrations (i.e., positive feedback), whereas GnRH-I expression either remains the same or decreases (i.e., negative feedback). In the present study, the hypothalamic expression levels of GnRH-I and Gnrhr1 were found to be no different between prepubertal and adult animals, despite marked differences in circulating sex-steroid hormone levels, whereas the hypothalamic expression level of GnRH-II was significantly higher in the adults than in the juveniles. Therefore, although the traditional GnRH-I neurons are likely to play a fundamental role in initiating FSH and LH release during the early stages of pubertal development, GnRH-II neurons may play an important role in maintaining elevated gonadotropin release during the final stages (i.e., at a time when the GnRH-I neurons are subjected to increasing negative sex-steroid feedback from the maturing gonads). Taken together, the data suggest that sexual maturation in primates is likely to be orchestrated by the concerted action of two distinct GnRH neuronal subtypes that respond differentially to sex-steroid feedback.

Tumor Biology

ENDOCRINE NEOPLASIA CASE REPORTS I

An Indolent Recurrent Parathyroid Carcinoma - A Case Report

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SUN-922

Introduction

Parathyroid carcinoma is a rare endocrine malignancy with reported incidence from 0.5 to 5% of primary hyperparathyroidism (1). Etiologies include prior neck irradiation, adenoma or hyperplastic parathyroid gland. Molecular pathogenesis includes RB gene overexpression, low P53, loss of APC and especially HRPT2 tumor suppressor gene. It has low malignant potential, but tends to recur locally or spread to contiguous areas. Here, we present a case of a recurrent parathyroid carcinoma that recurred after 17 years.

Clinical Case

The patient is a 56 YO female with Stage 1 breast cancer status post bilateral mastectomy who had underwent resection of a 2.5cm low-grade left lower parathyroid carcinoma in 1997 after 10 years of primary hyperparathyroidism. At that time of resection, iPTH was 2500 pg/ml and calcium level greater than 15 mg/dl. She presented with hypercalcemia (Calcium 11.5 mg/dl, PTH 67.1 pg/ml) again after 17 years. Work-up showed a 2.3 cm suspected parathyroid lesion in the left neck. She underwent removal of the left upper parathyroid gland along with a right enlarged parathyroid gland, as intra-operative PTH did not decline. Pathology confirmed parathyroid carcinoma with capsular invasion and muscle infiltration of the left gland and adenoma of the right gland. Repeat imaging in a month showed persistent parathyroid activity in the left neck. She had removal of the left upper parathyroid and a