hip fracture, and higher SHBG with increased risk of hip fracture. Circulating androgen rather than estrogen may be a biomarker for hormone effects on bone driving fracture risk. A randomised controlled trial of T therapy powered for the outcome of fracture may be warranted and should recruit men with baseline T in the lowest quartile of values.
Reference: (1) Hyde Z, et al. J Clin Endocrinol Metab 2010; 95: 3165-3172.

Tumor Biology

TUMOR BIOLOGY: GENERAL, TUMORIGENESIS, PROGRESSION, AND METASTASIS

Refractory Paraneoplastic Non Islet Cell Tumor Hypoglycemia (NICTH) from Hepatocellular Carcinoma Managed with Somatostatin Analogue and Glucocorticoids

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SAT-117

Non islet cell tumor hypoglycemia (NICTH) is a rare paraneoplastic syndrome generally seen in tumors of mesenchymal and hepatic origin. This syndrome is characterized by life threatening hypoglycemia caused by over expression of high molecular weight insulin-like growth factor 2 (IGF 2). The main stay of treatment is surgical resection of the tumor with no clear medical management being reported as standard of care.

We present the case of a 72 year old Cambodian man with no history of diabetes mellitus who presented to our institution with severe hypoglycemia complicated by a seizure and was found to have hepatocellular carcinoma (HCC). Hypoglycemia occurred during times of fasting. Laboratory evaluation revealed a serum glucose of 30mg/dl with insulin level of 2.2 mcIU/mL [2.6 - 24.9 mcIU/ml], C-Peptide of 0.17 ng/mL [0.80 - 3.85 ng/ml], BHB <0.1 mmol/L [0.0 - 0.3 mmol/L] and Proinsulin of <0.4 pmol/L [< or = 18.8 pmol/L]. Hypoglycemic agents screening was negative. Insulin Antibody was negative <0.4 U/mL [<0.4 U/mL] and adrenal insufficiency and hypothyroidism was ruled out. Patient was found to have an elevated IGF 2: IGF 1 ratio of 78 confirming the diagnosis of NICTH. IGF 2 level was 780 ng/ml [333 - 967 ng/ml] while IGF-1 was < 10 ng/ml [32-200 ng/ml] He was not a candidate for surgery due to portal vein involvement and tumor radioembolization was unsuccessful. Despite Prednisone dose of 10 mg twice daily and frequent complex carbohydrate meals, he still continued to have hypoglycemia ultimately requiring hospitalization. During hospitalization, he was treated with 50% dextrose infusion, 37.5 grams of dextrose gel every three hours and frequent small meals. Hypoglycemia remained refractory and a trial of diazoxide was ineffective. He was then started on octreotide with titration to 100mg every 8 hours with significant reduction in hypoglycemic episodes. He continues to remain on octreotide, Prednisolone 20mg twice a day, dextrose gel and dextrose infusion. Goal is to wean dextrose infusion and transition him to Pasireotide 40mg monthly.

Hepatocellular carcinoma has been associated with NICTH in the literature. NICTH is characterized by an IGF2:IGF1 ratio >10 as there is no commercially available assay for big IGF II. Definitive treatment involves surgical resection or tumor debulking. Octreotide has antiangiogenic and antineoplastic properties and unfortunately, few studies have shown improved survival and quality of life in patients with advanced HCC. In the case of our patient, tumor was unresectable and NICTH improved with octreotide and prednisolone.

Thyroid

THYROID DISORDERS CASE REPORTS II

Untreated Primary Hypothyroidism Presenting as Pica with Concurrent Hyponatremia and Rhabdomyolysis

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SAT-487

Background:

Psychosis is a rare but known presentation of hypothyroidism, whereas other mental health disorders are less commonly associated. Pica, the consumption of non-nutritive, non-food substances, has not been reported to be associated with hypothyroidism. We describe a case of untreated severe hypothyroidism in which the patient presented with pica that reversed with treatment with levothyroxine.

Clinical case:

A 65-year-old female with a history of cigarette smoking and chronic marijuana use was brought to the emergency department by family after she was found attempting to eat non-food objects such as pens and a toothbrush. She reported new onset unsteady gait and having frequent falls over the past several months in addition to being increasingly forgetful. She complained of fatigue and reported recent unintentional weight loss, but denied cold intolerance, skin or hair changes, or constipation. On admission, she was noted to be hypothermic with body temperature between 94-95 degrees Fahrenheit. Physical examination was essentially unremarkable with normal thyroid size and reflexes. No pretibial edema was noted. Admission labs showed hemoglobin of 14.0 g/dL with a white cell count of 8000 cells/uL, without evidence of anemia or infection. Sodium was low at 123 mmol/l and creatinine kinase was elevated at 989 U/L which peaked at 1356 U/L during her admission. CT of the head was negative for any acute intracranial process. Further workup was significant for TSH 85.6 mIU/L (0.27-4.20 mIU/L), free T4 <0.1 ng/dL (0.80-1.90 ng/dL), total T4 0.7 mcg/dL (5.1-11.9 mcg/dL), total T3 < 25 ng/dL (76-181 ng/dL), and TPO antibody 416 IU/ml (<9 IU/ml). AM cortisol was 27.0 ug/dL (6.2-19.4 ug/dL) at 8 AM, ruling out hypocortisolemia. The patient had not seen a medical provider in 10 years, had no recent health maintenance, and had no prior known history of thyroid disease. She was given IV fluids and started on oral levothyroxine 100 mcg daily due to the severity of hypothyroidism. Her sodium improved to 130 mmol/l over the next 4-5 days.