x-ray absorptiometry was unremarkable. Biochemical investigations showed normal inorganic phosphate, calcium, zinc, and magnesium, but low ALP. The patient had six previous ALP measurements and all of them were below the lower limit of normality (46 ± 116 U/L). These measurements were done in regular ob-gyn checkups with no further investigation or follow-up. In light of the hypophosphatasemia and pathologic fracture, the serum pyridoxal 5'-phosphate concentration was measured and found to be elevated 35.8 mcg/L (normal 5.0 ± 30.0 mcg/L). CLINICAL LESSONS/CONCLUSION: Hypophosphatasia occurs due to a deactivating mutation (or mutations) of the gene encoding Tissue-Nonspecific Alkaline Phosphatase (TNSALP), leading to a global deficiency of TNSALP activity and inadequate skeletal mineralization and fractures. The adult form presents during middle age with stress fractures. The first complaints might be foot pain, which is due to stress fractures of the metatarsals, and thigh pain, due to pseudo fractures of the femur. Our patient illustrates the importance of low serum ALP activity in the assessment of these patients. The correct diagnosis should help to avoid the use of traditional therapies for osteoporosis or osteomalacia, which would be ineffective or potentially harmful.

Neuroendocrinology and Pituitary

CASE REPORTS IN UNUSUAL PATHOLOGIES IN THE PITUITARY II

Renal Cell Cancer Metastasis to the Pituitary
Masquerading as a Non-Functioning Adenoma

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MON-263

Renal cell cancer (RCC) metastasis to the pituitary (MP) is rare with only a few case reports in literature. A 47 yr. old male with history of RCC and hypertension was seen in pituitary clinic for management of a pituitary mass. He initially presented to an outside hospital with persistent headaches, unintentional weight loss, severe fatigue, dizziness, cold intolerance, low libido and difficulty with erections. CT head showed a pituitary mass. Lab work revealed pan-hypopituitarism with adrenal insufficiency [random cortisol 0.7 ug/dL (4-19 ug/dL); ACTH 13 pg/mL (7-63 pg/mL)], hypothyroidism [T4 0.52 ng/dL (0.7-1.5 ng/dL); TSH 0.1 mIU/L (0.45-4.5 mIU/L)] and hypogonadism [total testosterone 15 ng/dL (200-1000 ng/dL); LH of 0.6 mIU/mL (1.5-9.3 mIU/mL); FSH of 3.5 mIU/mL (1.6-8.0 mIU/mL)]. Prolactin was slightly elevated at 34 ng/mL (2-18 ng/mL) from stalk compression. IGF-1 was 78 ng/mL (Z score -1.2).

When we saw him, he was already on hormone replacement with significant improvement in symptoms. He had no visual field defects or symptoms of diabetes insipidus (DI). As for his history of RCC, he underwent a partial left nephrectomy in 2015, followed by a completion nephrectomy shortly after. Pathology was consistent with clear cell RCC. He did not receive any adjuvant therapy; he completed stereotactic radiation to the sella and is currently on Iplimunab and Nivolumab for immunotherapy. MP is uncommon, and seen in 1-4% of patients with cancer in autopsy studies. Breast (40%) and Lung cancer (25%) are the most common tumors causing MP in women and men respectively, with very few case reports of RCC MP (2.6%). DI is the most common symptom of MP, which is thought to be due to direct vascular supply from hypophyseal arteries to the posterior pituitary. Interestingly in RCC MP, anterior pituitary dysfunction is more prevalent (90%) compared to DI (24%). There is also a tendency for suprasellar extension, causing vision loss. Radiologic features that could help distinguish MP from an adenoma include a rapidly enhancing sellar mass, erosion of sellar floor or posterior clinoid process, infundibular thickening, and the presence of intra-tumoral vascular flow voids. There reportedly is no benefit to using FDG-PET to diagnose MP from RCC. There are no standardized treatment guidelines and the choice of treatment is also influenced by the extent of systemic disease.

Thyroid

THYROID CANCER CASE REPORTS I

A Diagnosis of Thyroid Cancer Reveals a Triple Threat

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SUN-491

Introduction: The risk of secondary malignancies is increased in patients with papillary thyroid cancer (PTC). It is not completely clear if this risk is due to radioactive iodine treatment or due to other causes. We present a case of a patient diagnosed with papillary thyroid cancer (PTC) found to have lung cancer and small lymphocytic lymphoma which appear to be unrelated to radioactive iodine treatment.

Case Presentation: A 72 yo woman with a history of Graves’ disease, atrial fibrillation, and hyperparathyroidism initially presented to care for weight loss. She was found to have hyperthyroidism and was treated with methimazole. Thyroid ultrasound revealed multiple nodules including a 17mm right lower pole nodule with irregular borders for which she underwent FNA. Pathology demonstrated atypical-cells of undetermined significance (AUS), but thyroseq revealed a BRAF V600E mutation. She underwent total thyroidectomy with pathology showing multifocal thyroid cancer, 12mm and 0.8mm with 3/11 involved lymph nodes and a 3.2 cm right adrenal nodule consistent with metastases. He completed stereotactic radiation to the sella and is currently on Iplimunab and Nivolumab for immunotherapy. MP is uncommon, and seen in 1-4% of patients with cancer in autopsy studies. Breast (40%) and Lung cancer (25%) are the most common tumors causing MP in women and men respectively, with very few case reports of RCC MP (2.6%). DI is the most common symptom of MP, which is thought to be due to direct vascular supply from hypophyseal arteries to the posterior pituitary. Interestingly in RCC MP, anterior pituitary dysfunction is more prevalent (90%) compared to DI (24%). There is also a tendency for suprasellar extension, causing vision loss. Radiologic features that could help distinguish MP from an adenoma include a rapidly enhancing sellar mass, erosion of sellar floor or posterior clinoid process, infundibular thickening, and the presence of intra-tumoral vascular flow voids. There reportedly is no benefit to using FDG-PET to diagnose MP from RCC. There are no standardized treatment guidelines and the choice of treatment is also influenced by the extent of systemic disease.
CT chest which revealed a 2cm lung nodule. She had video assisted thoracoscopic (VATS) left lower lobe wedge resection with completion left lower lobectomy for a 3 cm lung adenocarcinoma with negative margins and 33 negative lymph nodes. She was subsequently treated with RAI after recovery from VATS procedure. Pretreatment thyroglobulin was 0.8 ng/ml with negative thyroglobulin antibodies. One month after her RAI treatment, ultrasound of the neck revealed suspicious bilateral level IV lymph nodes which increased in size during short term follow up. Serum thyroglobulin was 0.3ng/ml with negative antibodies and TSH 0.29 mIU/L. Biopsy of right level IV lymph node was positive for PTC with thyroglobulin washout >5000 while left level IV lymph node was negative for PTC and Tg washout was 0.1. She subsequently underwent right-sided modified radical neck dissection, with lymph nodes revealing PTC also involved by small lymphocytic lymphoma. She had repeat RAI ablation for thyroid cancer and is being actively monitored for her small lymphocytic lymphoma and lung adenocarcinoma.

Conclusion: We present a patient with no known history of malignancy who presented with 3 de novo primary malignancies. This case may demonstrate an increased risk of malignancy in patients with thyroid cancer not necessarily related to radioactive iodine treatment.

Tumor Biology
ENDOCRINE NEOPLASIA CASE REPORTS II
Diabetic Ketoacidosis Following Treatment of Endogenous Hyperinsulinism
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MON-909
Background: There has been only one case of Diabetic Ketoacidosis (DKA) reported following treatment of endogenous hyperinsulinism in a 16 month old.[1] This has not yet been described in adults.
Clinical Case: An 85 Y/O M with a PMH of metastatic gastric adenocarcinoma complicated by gastric outlet obstruction requiring TPN was admitted for symptomatic hypoglycemia. On the day of admission, his wife noted that he appeared confused and checked his capillary blood glucose, which was 35, prompting her to call EMS who gave him IV dextrose 50% (D50).
In the ED, he was placed on continuous dextrose 10% (D10) due to persistent hypoglycemia. To investigate the cause of hypoglycemia, D10 was stopped and a fast test was initiated. The patient developed symptomatic hypoglycemia 9 hours after stopping the D10. Laboratory results showed: plasma glucose 43 mg/dL, c-peptide 3.1 nmol/L, pro-insulin 18.7 pmol/L, insulin 10.7 uU/mL, beta-hydroxybutyrate (BHOB) 0.08 mmol/L. Insulin antibody and screen for oral hypoglycemic drugs were negative. Glucagon administration raised his blood glucose from 43 mg/dl to 50 mg/dl, 84 mg/dl, and 106 mg/dl after 10, 20, and 30 minutes, respectively. A diagnosis of endogeneous hyperinsulinism was made and the patient was started on Diazoxide 50 mg TID which was increased to 150 mg TID 2 days later. On day 3, Prednisone 20 mg daily was started due to inability to come off the D10 drip completely. On day 4 he was taken off D10. Due to plasma glucose >150 mg/dL, prednisone dose was reduced to 10 mg and then 5 mg on day 5 and 6, respectively. On day 8, he was found to be in DKA with a plasma glucose of 250 mg/dL, metabolic acidosis with an anion gap of 20, HCO3 of 15 mg/dL, undetectable insulin levels and BHOB of 5.49 mmol/L. Prednisone and Diazoxide were discontinued and he was started on an intravenous insulin infusion. Within 24 hours he became persistently hypoglycemic requiring D50 and prednisone was restarted. DKA developed once again and the patient was subsequently made comfort measures only. Further investigation of his endogenous hyperinsulinism was not pursued. The patient was transferred to inpatient hospice, where he passed away several days later.

Conclusion: This is the first reported case of an adult patient with documented endogenous hyperinsulinism developing DKA following treatment with diazoxide and prednisone. Reference: (1) Mangla et al. J Ped End Met. 2018; 31(8): 943-945.