Preparation with Octreotide before any manipulation or anesthesia is recommended to avoid a carcinoid crisis. However, if a crisis develops management is mainly with a continuous Octreotide infusion. The use of beta-adrenergic agents is debated, due to a possible “paradoxical effect” which could further worsen hypotension. Others argue that there is a role in preventing prolonged episodes of hypotension. In this case, it was required high doses and the infusion was needed for 5 days, probably related to the presence of ESRD which could have prolonged the bioavailability of the vasoactive agents.

Healthcare Delivery and Education
EXPANDING CLINICAL CONSIDERATIONS FOR PATIENT TESTING AND CARE

Introduction of an Ambulatory Curriculum in Endocrinology Diabetes and Metabolism for Internal Medicine Trainees
Caitlin A. White, MD, Serena Cardillo, MD.
University of Pennsylvania, Philadelphia, PA, USA.

MON-122
Internal Medicine (IM) training programs are disproportionately weighted to inpatient learning opportunities. IM residents’ exposure to outpatient internal medicine subspecialties, such as Endocrinology, Diabetes and Metabolism (EDM), is limited. This may contribute to gaps in medical knowledge in these content areas in spite of the frequent occurrence of EDM disorders. Further, reduced exposure during training may adversely impact interest in pursuing fellowship training in these fields, in spite of increased societal need.

In July 2015 the IM residency program at the University of Pennsylvania switched to a “6 + 2” training model. In this training module, trainees are grouped into four cohorts, each of which have 6 weeks of inpatient rotations, followed by 2 weeks of an ambulatory experience. This model allowed the introduction of an organized ambulatory curriculum during the 2-week outpatient blocks, which was named the Interactive Learning Module (ILM). This creates the opportunity to deliver a standardized curriculum to all residents. Through this module we coordinate an immersive experience in five distinct outpatient themes: General Internal Medicine, Infectious Disease, EDM, Nephrology, and Rheumatology. The EDM ILM is co-led by a core faculty member and senior endocrinology fellow with interest in pursuing a career in medical education.

During the EDM ILM, IM interns receive 12 hours of interactive didactics in high yield content areas including: Diabetes Workshop, Adrenal and Pituitary Diseases, Osteoporosis, Thyroid Diseases, Women’s Health, Calcium Disorders, Obesity and Endocrine Emergencies.

Interns are given 3-4 opportunities to work with an EDM faculty member in the outpatient setting. Interns are also asked to read and review three publications within the field, which are discussed as a group.

The EDM ILM has been consistently praised by IM interns, and feedback for the curriculum has been overwhelmingly positive. 97% of interns agreed the breadth of content was comprehensive and 94% agreed that the content was applicable to their delivery of ambulatory primary care.

The quality of the teaching was rated high among 96% of interns. 89% reported improved understanding of EDM. Four years after the institution of the curriculum, we have not yet noted an increase in graduating IM residents choosing fellowship in EDM. However, all three of our IM residents who have matched into EDM fellowship over the past four years have chosen to stay at our institution. Faculty have thrived with these teaching opportunities: their consistently high evaluations have been an important criterion for academic promotion. Co-leading this course has been an important opportunity for senior EDM fellows to build expertise in medical education; three out of four participating fellows accepted academic positions with GME support.

Neuroendocrinology and Pituitary
CASE REPORTS IN CLASSICAL AND UNUSUAL CAUSES OF HYPOPITUITARISM II

Pituitary Apoplexy Induced by Gonadotropin-Releasing Hormone Agonist Administration: A Rare Complication of Prostate Cancer Treatment
Mariana Marques Barbosa, MD, Silvia Cristina de Sousa Paredes, MD, Maria João Machado, MD, Rui Almeida, MD, Olinda Castro Marques, MD
Hospital de Braga, BRAGA, Portugal.

MON-239
Background: Pituitary apoplexy is a potentially life-threatening clinical condition associated with bleeding and/or infarction into the pituitary gland, usually within a tumor. Gonadotropin-releasing hormone (GnRH) agonists, currently used in the treatment of advanced prostate cancer, have been described in the literature as a rare cause of pituitary apoplexy.

Case: We report the case of a 69 year-old man with a known pituitary macroadenoma incidentally detected in 2016, without further investigation. He was diagnosed with prostate cancer in 2017 and underwent retropubic prostatectomy. Two years later there was evidence of histologic prostate tumor progression, so he started treatment with leuprolin 45mg (GnRH agonist). Immediately after the first subcutaneous injection he presented with acute-onset severe headache, followed by left eye ptosis, diplopia and vomiting. Left cranial nerve III palsy was confirmed by examination in the emergency department. Head computed tomography showed a lesion in the sellar region; laboratory endocrine workup was significant for total testosterone 72.07 ng/dL (86.49 – 788.22), with no other abnormalities. Magnetic resonance imaging of the pituitary revealed tumor enlargement and a T1-hyperintense signal, compatible with recent haemorrhagic sellar content. The patient was managed conservatively with high dose steroids, and symptoms were significantly improved on discharge.

Discussion: Pituitary apoplexy induced by GnRH agonist administration is a rare complication, described in only 20 documented cases to date. The pathophysiologic mechanism involved is not clearly established and several hypotheses have been proposed: a combination of metabolic hyperactivity, cell division/tumor growth and increased intrasellar pressure, inducing ischemia in a poorly perfused adenomatous tissue given the demand. Although
uncommon, healthcare professionals should be aware of this serious consequence of GnRH agonist administration and recognize the signs, preventing a delay in diagnosis and treatment.

Diabetes Mellitus and Glucose Metabolism

TYPE 2 DIABETES MELLITUS

Was Metformin the Culprit for This Lactic Acidosis?

Pranathi Vemparala, MD, Mahesh Krishnamurthy, MD, FACP.
EASTON HOSPITAL, Easton, PA, USA.

SUN-683

Introduction

Metformin is the first-line drug for treatment of Type 2 diabetes. A meta-analysis of 70,490 patient-years of metformin use reported no lactic acidosis. We present a case of a patient who developed lactic acidosis while on Metformin; with other contributing factors.

Case Description

A 72-year old male with dementia, diabetes, hypertension, hypothyroidism and “muscular dystrophy” was admitted with encephalopathy. Medications included levothyroxine, donepezil, insulin glargine and metformin. A Brain CT scan revealed frontal lobe atrophy and lacunar infarcts. Admission blood work revealed lactic acidosis of 5.6. Sepsis workup was negative. Metformin was discontinued, and the patient improved with intravenous hydration. Upon discharge, Metformin was restarted. Follow-up lactic acid was normal. After a subsequent hospitalization with similar presentation and peak lactic acid of 4.7, metformin was stopped altogether. The patient was referred to a neuromuscular specialist and a diagnosis of Mitochondrial encephalomyopathy, lactic acidosis and stroke-like episodes (MELAS) was made. The “muscular dystrophy” was likely mitochondrial disease. A third hospitalization (while not on Metformin) saw a peak lactic acid of 2.8. We concluded that the lactic acidosis was secondary to MELAS, but Metformin had caused the significant spikes seen during the first two hospitalizations.

Discussion

Mitochondrial disorders must be in the differential diagnosis for patients diagnosed with muscular dystrophy. The hallmark of MELAS syndrome is stroke-like episodes that result in hemiparesis, hemianopia, or cortical blindness. Other features include seizures, recurrent headaches, vomiting, short stature, and muscle weakness. Patients with mitochondrial diseases also have a high incidence of diabetes. Lactic acidosis occurs during stress. DNA testing is the gold standard for diagnosis.

Conclusion

Metformin is contraindicated in patients with mitochondrial disease and diabetes due to the predisposition for lactic acidosis. This is not part of the current package inserts for prescribers and patients- and we strongly recommend inclusion of this language.

Neuroendocrinology and Pituitary

CASE REPORTS IN UNUSUAL PATHOLOGIES IN THE PITUITARY II

Pituitary Tumor Apoplexy Presenting with Acute Psychosis

Maria Mercedes Pineyro, MD, Patrícia Agüero, MD, Florencia Irazusta, MD, Claudia Brun, MD, Paula Duarte, MD, PhD, Vanessa Ems, MD.
Hospital de Clínicas, Montevideo, Uruguay.

MON-252

Background: Pituitary tumors (PT) can present with neuro-psycho-physical symptoms. It has been associated with hormonal changes, as well as extension of the tumor to the diencéphalon. Psychopathology has been reported in up to 83% in Cushing Disease (CD) and 35% in acromegaly (ACR). Psychiatric disorders (depression, anxiety and psychosis) have been reported up to 77% in CD and 63% in ACR. We present a rare case of a patient presenting with acute psychosis and a PT apoplexy. Case: A 27-year old Caucasian female with a PMH of primary hypothyroidism presented with a 15-day history of delusions. She had delusional ideas on the subject of harm and prejudice, persecutory and mystical-religious. The mechanism was mainly intuitive and interpretive with false acknowledgments. She also had sleep disturbance, death ideation and subsyndrome of altered consciousness. There was no history of substance abuse or psychiatric disorders. She did not report headaches, visual disturbances, symptoms of hormone hypersecretion or hypopituitarism. She had regular menses on BCP. She had no family history of mental illnesses. Physical exam revealed reluctance, latency in responses and bradykinesia. She did not have acromegalic or cushingoid features. She was diagnosed with acute psychosis with atypical features so a brain CT was performed, which showed a sellar mass. Pituitary MRI revealed a sellar mass measuring 15x12x13 mm, with suprasellar extension, optic chiasm compression, hyperintense on T1 and hypointense on T2-weighted imaging compatible with subacute hemorrhage. She was treated with neuroleptics and benzodiazepines. Lab work revealed high prolactin (PRL) (114ng/dl), and normal 8 AM cortisol, FT4, LH, FSH and IGF-1 levels. Repeated PRL was 31.6 ng/dl after changing psychiatric treatment to aripiprazole. Her psychiatric symptoms improved. We postulate a diagnosis of PT apoplexy that presented with acute psychosis. In relation to the nature of the PT we postulate a non functioning pituitary adenoma (NFA) or a partial resolution of a prolactinoma after apoplexy. A follow up MRI is pending.

Discussion: Infrequently, psychiatric symptoms may be the primary manifestation of brain tumors. Patients with PT have been reported to have altered quality of life, reduced coping strategies, increased prevalence of psychopathological alterations and maladaptive personality disorders. In addition, they can present with psychotic symptoms, mostly reported with hormone excess (GH and cortisol). Psychiatric symptoms such as anxiety and neurosis have been reported in NFA and prolactinomas. However, it is not clear a higher prevalence of psychiatric illnesses in