in favor of iv insulin and fluid resuscitation, with admission to the medical intensive care unit. Further lab testing demonstrated low C-peptide levels and positive IA-2 and GAD-65 antibodies, confirming autoimmune diabetes. Endoscopic biopsy was also consistent with autoimmune colitis, and TSH one month after discharge was 123.70 (0.30-5.00 mcIU/mL) with free T4 < 0.1 (0.6-1.6 ng/dL).
Despite early discontinuation of anti-PD1 therapy the melanoma has remained in remission for three years, suggesting a sustained immune response. He continues to require insulin and thyroid hormone replacement, though the autoimmune colitis has resolved.
Conclusion: This case demonstrates the overall benefit of immune checkpoint inhibitor therapy in the treatment of metastatic melanoma, while highlighting a potentially lethal therapy complication with the concurrent onset of multiple autoimmune processes affecting separate organ systems. Increased awareness of the potential for DKA in patients not previously diagnosed with diabetes is needed to avoid delays in care and improve outcomes. This case also suggests a potential benefit to integrating routine blood glucose monitoring in immune checkpoint inhibitor treatment protocols, the utility of which should be further investigated.

Neuroendocrinology and Pituitary

PITUITARY TUMORS II

The Prevalence of Acromegaly in the Sleep Apnoea Clinic

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MON-302

The Prevalence of Acromegaly in the Sleep Apnoea Clinic
Introduction: The prevalence of acromegaly in the general population ranges 4-14/100,000. 45-80% of acromegaly patients have obstructive sleep apnoea (OSA). The OSA population might represent a target group for earlier detection of acromegaly, thereby reducing associated long-term morbidity.
Methods: Patients attending the sleep service (11/2014-04/2018) were recruited in a prospective multicentre cohort study. All had serum IGF-1 measurement and completed a screening questionnaire for five key symptoms associated with acromegaly. Those with raised age-specific IGF-1 underwent further biochemical assessment to investigate for acromegaly.
Results: 1080 participants (73% male, mean age 55.6±12.0yrs) with confirmed OSA were recruited across two sites. Forty-three patients (4%) reported at least 4/5 acromegaly-related symptoms. There was no correlation between serum IGF-1 and symptom score. Sixty-one patients (5.7%) had elevated IGF-1 level on initial assessment. Fifty-one had repeat IGF-1 testing, while one had growth hormone measurement of <1μg/L. Nine patients were lost to follow-up, including one death.
Of the repeat IGF-1 tests, results were normal in 24 cases and no further investigation was undertaken. Repeat IGF-1 results were unavailable in 3 cases. In the remaining 24 patients with persistently raised IGF-1, 11 had GH <1μg/L, suggesting that acromegaly was unlikely. The remainder (n=13), as well as the 3 individuals with unavailable IGF-1 results, had an oral glucose tolerance test. One patient (BMI of 23.7kg/m^2) was diagnosed with acromegaly, was diagnosed with severe OSA and reported 4/5 acromegaly-related symptoms during screening.
Conclusion: Our study identified a single case of acromegaly within the OSA population that may represent a higher prevalence than in the background population, however is based on a single case. As a consequence of the significant number of patients with elevated serum IGF-1 measurements requiring further investigation, IGF-I is not currently a cost-effective screening tool for early detection of acromegaly in OSA patients.
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Thyroid

HPT-AXIS AND THYROID HORMONE ACTION

Reduced Cholesterol Absorption and Synthesis Markers in Patients with Hyperthyroidism Due to Graves' Disease

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SAT-456

Background:Thyroid hormones have been reported to promote cell-surface expression of low-density lipoprotein receptor (LDL-R), and also increase mRNA expression of HMG-CoA reductase at the same time. Since LDL cholesterol (LDL-C) uptake via LDL-R is relatively superior to cholesterol synthesis in hyperthyroidism, plasma LDL-C levels can be lower as compared to euthyroid state. Conversely, hypothyroidism can increase plasma LDL-C levels because cholesterol absorption via Niemann-Pick C1-like 1 has been suggested to increase in hypothyroidism. However, there have been no reports about changes of cholesterol absorption and synthesis markers by the treatment of hyperthyroidism in patients with Graves' disease.
Patients and method: We collected plasma samples from patients with hyperthyroidism, who were diagnosed as Graves' disease (n=17, M/F: 4/13, age: 24-70 years old). Thyroid hormones, general lipid profiles (Total cholesterol: TC, LDL-C, high-density lipoprotein cholesterol: HDL-C and triglyceride: TG), apolipoproteins, markers of cholesterol synthesis (lathosterol) and absorption (campesterol, sitosterol, cholestanol), lipoprotein lipase (LPL), and proprotein convertase subtilisin/kexin type 9 (PCSK9) were analyzed before treatment, and at euthyroid state (eu), 3 and 6 months after attaining euthyroid state (eu-3M and eu-6M). **Result:** It took 159.2±108.6 days to attain euthyroid state by the thiamazole treatment. TC, LDL-C and HDL-C