SAT-LB41

Background: The primary aldosteronism (PA) subtype is usually confirmed by computed tomography (CT) and adrenal venous sampling (AVS). However, the subtype diagnosis by AVS is not necessarily consistent with the subtype diagnosis by CT. Patients with PA who show normal-appearing adrenals on CT but unilateral disease on AVS (CT-negative and AVS-unilateral group) are often found. However, few studies have focused on them, despite a discrepancy between CT and AVS subtype diagnosis. Objective: The aim of this study was to evaluate the clinical features of CT-negative and AVS-unilateral group and assess whether they obtain benefits from surgery.

Methods: We retrospectively analyzed 362 consecutive patients with PA who underwent both CT and adrenocorticotropic hormone (ACTH)-unstimulated AVS at Kanazawa University Hospital. First, the patients were divided into normal-appearing adrenals, bilateral adrenal nodules, or unilateral adrenal nodules based on CT findings. Second, they were classified as having unilateral or bilateral disease when the CT findings suggest normal-appearing adrenals on CT but unilateral disease on AVS (the complete and partial success combined) were not significantly different between them (71% vs. 93% (p=0.07) and 71% vs. 90% (p=0.13), respectively).

Conclusion: The clinical features of CT-negative and AVS-unilateral group were significantly similar to those of CT-negative and AVS-bilateral group. They benefited from surgery, and AVS should be performed for patients who pursue surgical management when the CT findings suggest normal-appearing adrenals.
On average, patients screened positive for 2 (median value) eating behavior traits. Four (5.41%) patients screened positive for five eating behavior traits, the maximum observed in our sample. Biserial correlation analysis showed that satiety was correlated with the FTO gene (Pearson’s r=0.502, p<0.001) and eating disinhibition was negatively correlated with hunger (Pearson’s r=-0.450, p=0.034). Overall, overweight and obese patients had a disproportionately high incidence of eating disinhibition, food desire, and the FTO obese gene. These atypical behaviors can contribute to their difficulty in losing weight. Specific strategies can be discussed with patients around their atypical behaviors with regular follow up appointments by the clinician. Genetic testing can provide important patient education to improve outcomes related to weight management and health outcomes.

Adrenal

ADRENAL CASE REPORTS III

Isolated Hypoaldosteronism Due to Autoimmune Adrenalitis in a Patient With Autoimmune Polyglandular Syndrome.

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MON-LB038

BACKGROUND

At the initial presentation of autoimmune adrenal insufficiency, most patients present with hormonal deficiencies from all three layers of adrenal cortex. However, isolated aldosterone deficiency causing a true partial adrenal insufficiency in the setting of autoimmune adrenalitis remains underrecognized.

CASE REPORT

A 67-year old female patient with a known history of diabetes mellitus type 1 since the age of 13 and morphea, presented with progressively worsening symptoms of confusion and hallucinations, fatigue, and loss of appetite over the past 5 years. During this time, she has had frequent and recurrent episodes of mild intermittent hyponatremia with hyperkalemia requiring intravenous fluids and ingested salt tablets, especially when she felt more symptomatic. On her initial evaluation here, she presented with hyponatremia (125 mmol/l, n: 135-145 mmol/l), low osmolality (264 mOsm/kg, n: 275-295 mOsm/kg), and normal potassium level (3.6 mmol/l, n: 3.6-5.2 mmol/l). Further investigations drawn at the same time revealed a low aldosterone (<4 ng/dL), normal renin (5.3 ng/mL/hr, ref 2.9-10.8), normal serum cortisol level (and normal response to Cortrosyn stimulation), though all in the setting of positive antibodies against 21-hydroxylase. Pan-imaging revealed no evidence of malignancy that can be causing ectopic SIADH production. Additional testing showed presence of auto antibodies contributing to pernicious anemia and thyroid disease. Treatment was started with fludrocortisone 0.1 mg tablet daily and she was advised to take the salt tablets only if she has any symptoms. The patient’s symptoms have resolved 8 months since this diagnosis, with normalized sodium and potassium levels.

CONCLUSION

Autoimmune primary adrenal insufficiency usually affects all three layers of the adrenal cortex, where patients present with deficiencies in cortisol and aldosterone. Isolated hypoaldosteronism has rarely been reported, however because it can cause life-threatening hyponatremia, it is an important entity to recognize. It is important to work up in such patients as they may be in the initial stages of autoimmune Addison’s disease and can progress to developing cortisol deficiency, though the time course to this progression is not well known.

Pediatric Endocrinology

PEDIATRIC SEXUAL DIFFERENTIATION, PUBERTY, AND BONE BIOLOGY

Serum 25-Hydroxyvitamin D Is Not Associated With the Type of Central Precocious Puberty in Girls

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SUN-LB18

Changes of serum 25OHD levels in girls with different types of central precocious puberty

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[Objective] To evaluate the clinical value of serum 25-hydroxyvitamin D (25OHD) in girls with different types of central precocious puberty (CPP), in order to provide basis for the clinical diagnosis and treatment.

[Methods] 340 CPP girls diagnosed in our hospital from January 2016 to January 2018 were enrolled and retrospectively studied. According to the progression of Tanner stage ≥1 during 6 months, bone age(BA) levels were higher than chronological age of more than 1 year. 226 patients were included in the rapidly progressive CPP group (RP-CPP), while 114 patients were included in the slowly progressive CPP group (SP-CPP) as a control. We analyzed the correlation between serum 25OHD levels and the different puberty characteristics (BA, disease course, body mass index (BMI), bone mineral density (BMD), serum LH peak to FSH peak ratio (LHP/FSHP), insulin-like growth factor 1(IGF1)) of two groups. According to sunshine duration, the sampling season was divided into two groups (December to May, June to November), then we compare the correlation between different serum 25OHD levels and season of sampling as well as the different puberty characteristics respectively.

[Results] (1) The mean serum 25OHD levels of CPP girls were 15.88±6.87ng/mL. The 25OHD levels of 68 (20.0%), 95 (27.9%) and 167 (49.1%) patients were <10, 10-15 and 16-29 ng/mL, respectively. Only 10 (2.9%) patients had normal 25OHD (>30 ng/mL). (2) No significant difference in serum 25OHD levels between RP-CPP group and SP-CPP group (F =0.809, p=0.369) was found. There is no correlation of BMD and disease course between the two groups (p>0.1). Bone age, BMI, LHP/FSHP and IGF1 levels in RP-CPP group were higher than SP-CPP group (P<0.05). Logistic regression analysis showed that