studies on steroidogenesis as the target of EDCs has also attracted less attention compared to other metabolic pathways. We studied the effects of two extensively used phthalate esters viz., di-ethyl hexyl phthalate (DEHP) and di-butyl phthalate (DBP) on the adrenal gland in Wistar rats and checked its susceptibility against the exposure of these extensively used phthalates categorized as EDCs. Male rats were divided into seven groups (n = 6). Group I (control) received only corn oil (as a vehicle). Group II, III and IV were treated daily with DEHP at the dose of 250, 750 and 1500 mg/kg-BW respectively per os for 14 days. Group V, VI and VII were treated with a daily dose of DBP 100, 500 and 1000 mg/kg-BW respectively per os for 14 days. The comparative histological observation of endocrine glands i.e., pituitary, pineal, thyroid, parathyroid, adrenal gland and testes unveil that changes in adrenal gland towards the DEHP and DBP were more remarkable compared to other endocrine glands. Glucocorticoid biosynthesis pathway in the adrenal gland was analyzed by molecular docking of DEHP and DBP with the enzyme proteins involved in the pathway using Maestro Schrodinger 9.4 software. It showed the potential of DEHP and DBP to inhibit these proteins comparable to the known inhibitors of enzymes involved. The present study used a novel approach of in silico and in vivo to elucidate the sensitivity of adrenal gland towards EDCs through the analysis of the sensitivity of adrenal steroidogenesis on exposure to two widely distributed phthalates with environmental and human health risk potential.

Cardiovascular Endocrinology
ENDOCRINE HYPERTENSION AND ALDOSTERONE EXCESS

Primary Aldosteronism in Intracerebral Hemorrhage. Not Intracerebral Hemorrhage in Primary Aldosteronism.
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SAT-544
Background: Patients with primary aldosteronism (PA) are more prone to cardiovascular complications including intracerebral hemorrhage (ICH) than those with essential hypertension. But how about PA in ICH patients - not ICH in PA patients? Since ICH patients with PA are at high risk for recurrent hemorrhage and other complications, diagnosis of PA is important even after the occurrence of ICH. Here we aimed to clarify the clinical features of PA in ICH patients at the largest scale ever and to evaluate the efficacy of PA screening with machine learning.

Methods: Out of 181 ICH patients admitted to our hospital between June 2016 and February 2017, 126 patients of hypertensive ICH were enrolled in this study. Plasma aldosterone concentration (PAC), plasma renin activity (PRA) and other hormones were measured in the morning two days after admission.

Results: After leaving out those who had been taking medications which could interfere with PAC or PRA on admission, nine patients were positive for PA screening (PAC/PRA ratio >200 and PAC >120 pg/mL) and 53 were negative. Age (68.6 vs 68.5 y), sex (male 66.7 vs 69.8 %) and blood pressure (172/97 vs 177/100 mmHg) were similar between these two groups. Bleeding volume (14.6 vs 16.2 mL) was also similar, but the lesion was more common in thalamus rather than putamen in PA positive group. Serum potassium was slightly lower in positive group (3.6 vs 3.9 mmol/L; P=0.096) on admission, and the difference became more evident two days later (3.7 vs 4.0 mmol/L; P=0.040). There were no differences in other hormones including cortisol and catecholamine. As for prognosis, PA positive patients had more severe motor or cognitive impairments. Dimension reduction procedure using t-SNE certainly divided these patients into clusters compatible with PA screening tests. Further, we extrapolated this result to 21 patients who had been taking medications which could lower PAC/PRA ratio such as ACE inhibitors, ARB or diuretics and were excluded from the analysis above. K-nearest neighbor method revealed that even in those who had been taking PAC/PRA lowering medications, PAC/PRA ratio >160 could be regarded as positive for PA screening.

Discussion: This is the largest study ever that investigated the clinical features of PA in ICH patients. Contrary to expectations, ICH patients with PA were not necessarily younger than those with essential hypertension. But they were more likely to have severe outcomes even though blood pressure and bleeding volume were similar. This may be partly because of higher aldosterone. The difference in serum potassium was masked on admission probably due to increased sympathetic activity. But about two days later, when its activity peaked out, lower serum potassium in PA positive group became more evident. This can support the efficacy of PA screening tests even in ICH patients, so PA screening should not be awaited just because they have developed ICH.

Reproductive Endocrinology
CLINICAL STUDIES IN FEMALE REPRODUCTION I

Analytical Performance and Clinical Value of AMH Testing
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SAT-016
The clinical uses for of anti-Mullerian hormone (AMH) measurements have risen dramatically over the past 5 years. This increase has been driven by the release of fully automated immunoassay systems with European and FDA approval of AMH measurements for assessing ovarian reserve in women presenting at fertility clinics. Most recently the MenoCheck® AMH method was cleared by FDA as an aid in determining menopausal status in women.
Neuroendocrinology and Pituitary

CASE REPORTS IN UNUSUAL PATHOLOGIES IN THE PITUITARY II

Sympromic Hypogonadism: Co-Existence of Morsier and Klinefelter Syndromes

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INTRODUCTION: Morsier Syndrome is a rare congenital malformation, characterized by hypoplasia / aplasia of the septum pellucidum and hypoplasia / aplasia of the optic nerves, in addition to pituitary and hypothalamic hormonal deficiencies. Klinefelter Syndrome is a sexual chromosomal genetic alteration, a frequent cause of male hypogonadism. The association of Morsier syndrome and Klinefelter is described below.

CLINICAL CASE

We report the case of a 12 year-old boy with psychomotor retardation and nystagmus presented at 14 months of age with growth hormone deficiency (low weight and height), and diabetes insipidus with hypernatremia of 159 mEq and low urinary density (less than 1,005).

MRI showed an absence of septum pellucidum, thick right frontal cortical dysplasia with asymmetric appearance of the grooves, small optic chiasma, hypoplastic pituitary gland (3 mm height), compatible with Morsier syndrome.

The physical examination draws attention to tall stature, and long lower limbs, facies with prominent forehead and hypertelorism, gynecomastia and small external genitalia for age.

Hormonal evaluation revealed hypergonadotropic hypogonadism with a 47 XXY karyotype suggeting Klinefelter syndrome.

CONCLUSION:

We report the first case of Morsier syndrome, associated to Klinefelter syndrome. Both syndromes may present with hypogonadism. However, the diagnosis of klinefelter syndrome was made based on the phenotypic characteristics of this patient including hypergonadotroic hypogonadism and abnormal karyotype analysis.

Thyroid

THYROID NEOPLASIA AND CANCER

Comparison of ACR-TIRADS to American Thyroid Association Guidelines: Can We Choose Wisely Without Missing Malignancy?

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MON-526

Thyroid ultrasound has been widely used to determine which nodules need further work up. The goal of this study was to apply the new ACR-TIRADs criteria to a retrospective data set and compare the outcomes to the ATA scoring system. Methods: In a retrospective study, ultrasonographic images of the all nodules biopsied in 2015 were reviewed by radiologists, blinded to fine needle aspiration (FNA) biopsy result, using a checklist to report the image. The checklist was prepared based on 2015 ATA guideline. The ultrasonographic characteristics of thyroid nodules were compared with the result of biopsy to determine positive predictive value (PPV), negative predictive value (NPV), sensitivity and specificity of checklist in predicting malignancy. These results were published previously. The same data was then reviewed using the ACR-TIRADS tool to assess the number of US and FNA that would been avoided and was then reviewed using the ACR-TIRADS tool to assess the number of non-benign cytologies that would have been avoided had these criteria guided care in 2015. Results: 419 thyroid nodules were reviewed 7.1% were malignant, 10.3% were FLUS and 78.3% were benign. Sensitivity of the ACR-TIRADs and ATA respectively was to detect non-benign nodules was 70% and 97% Specificity was 29% and 11%. Positive predictive value was 18% and 9% whereas Negative predictive value was 81% and 98%. 28% of the FNAs done in 2015 could have been avoided if applying the TIRADs criteria, however 15 non-benign and 8 malignant cases would have been missed. Conclusion: The TIRADs approach adds value to the system by reducing many...