exclude bilateral PA and more strict indication of AVS are warranted.

Neuroendocrinology and Pituitary

ADVANCES IN NEUROENDOCRINOLOGY

Reduced Locomotive Behaviour and Increased Arcuate Nucleus Inflammation Are Observed in KISS1R KO Male Mice

Raj Patel, BMedSc; MBiomedSc, Shane K. Maloney, PhD, Jeremy Troy Smith, PhD.
The University of Western Australia, Perth, Australia.

SUN-265

The neuropeptide kisspeptin, encoded by the *Kiss1* gene, binds the G- protein-coupled receptor Kiss1r (also known as GPR54) and is a novel player in the delicate balance of energy intake and expenditure. Mice that have a dysfunctional gene for Kiss1r develop an obese and diabetic phenotype. To further study how kisspeptin signalling impacts on energy balance, we investigated the relationship between absent kisspeptin signalling and locomotor behaviour in Kiss1rKO and wild type mice. Mice had free access to running wheels, and we examined the characteristics of wheel running over three weeks, and its flow-on effects on body mass. We subsequently examined dopaminergic neurons (via tyrosine hydroxylase (TH) staining) and hypothalamic inflammation (via Iba1 stained microglia). These studies also were performed following gonadectomy (GDX), to control for gonadal steroids. In intact males, the knockout (KO) mice covered only 10% of the distance travelled by wild-type (WT) per 24h (WT, 6363±643m; KO, 652±219m; P<0.0001). Moreover, in the WT there was a clear circadian pattern to the wheel-running activity, with most activity during lights off, while in the KO the running appeared randomly distributed across the 24h. After GDX, KO males continued to run significantly less than their WT counterparts (WT, 1652±474m; KO, 998±219m). In intact females, the KO mice covered only 23% of the distance travelled by WT per 24h (WT, 6030±747m; KO, 1379±364m; P<0.004). In OVX females, there was no difference between WT and KO mice (WT, 4150±1367m; KO, 3117±830m). Bodyweight analysis showed that access to running wheels prevented obesity usually seen in the Kiss1rKO mouse. In fact, in GDX males and females (at days 21 and 22 of wheel running) the KO mice were significantly lighter than WTs (at day 22: males, WT 28.67g; KO, 23.70g; P<0.05; females, WT, 27.38g; KO, 23.30g; P<0.05). Examination of TH revealed no significant difference in expression in the different genotypes in both sexes, in all areas examined. Investigation of Iba1 revealed significant higher counts in the male KO compared to the WT in the arcuate nucleus, but no difference in any other regions. We show that the locomotor activity in male and female Kiss1r KO mice is heavily dependent on the status of gonadal sex steroids. However, the lower running activity in male KO compared to WT remained after GDX, and this was paired with an elevated inflammation marker in the arcuate nucleus. Whether absent kisspeptin signalling acts as a significant regulator of voluntary activity is debatable, but patterns of locomotion behaviour could be disrupted, potentially involving circadian rhythm, this is under further investigation.

Diabetes Mellitus and Glucose Metabolism

DIABETES DIAGNOSIS, TREATMENT AND COMPLICATIONS

Association of Electrocardiograph Parameters and Diabetic Peripheral Neuropathy

Seong Su Moon, MD, PhD, Young-Sil Lee, MD, PhD.
Dongguk University Gyeongju Hospital, Gyeongju, Korea, Republic of.

SUN-613

Aim: The purpose of this study was to assess the relation between Prolonged P wave duration with diabetic peripheral neuropathy in subjects with type 2 diabetes. **Methods:** We assessed the measures of electrocardiographic function in 105 in 147 Korean subjects with type 2 diabetes, who visited Dongguk University Hospital for regular health checkup using electrocardiogram (ECG). We measured several electrocardiogram parameters including ventricular rate, PR interval, QRS duration, QT, QTC and P wave duration. Subjects were grouped as without diabetic peripheral neuropathy (≤2) and with peripheral neuropathy (≥2) based on Michigan Neuropathy Screening Instrument Examination Score (MNSIES). **Results:** The population mean age was 61.50±11.17 years and 60.78% were men. The participants with DPN significantly found higher with age, MNSIES and P wave duration as compared to without DPN. The prevalence of drinking significantly found higher in participants with diabetic peripheral neuropathy. Furthermore, in a multiple regression analysis, MNSI examination score significantly showed positive association with prolonged P wave duration after adjustment with age, MNSIES and drinking alcohol(β, 1.123; 95% CI, .109~2.138; p=.030). **Conclusions:** The current study revealed an association between prolonged P wave and MNSI examination score.

Pediatric Endocrinology

PEDIATRIC ENDOCRINE CASE REPORTS II

First Report of Monozygotic Twins with Russell Silver Syndrome in China: Recombinant Growth Hormone Therapy and 3-Year Observation

Shu Liu, deputy director, Jianhui Jiang, MD.
Guangdong Women and Children Hospital, Guangzhou, China.

MON-054

First report of monozygotic twins with Russell Silver syndrome in China: recombinant growth hormone therapy and 3-year observation

Background: Russell Silver syndrome (RSS) is a rare genetic condition that includes an important index of suspicion when a child presents with hemihyperthrophy. There are more than 400 cases described in the literature, but twin pairs with RSS have rarely been reported. Up to now only six monozygotic twin pairs have been described [1]. However, this has not been reported in east Asian population yet.

Clinical Case: A 4 years and 9 months old monozygotic twin girl with a history of growth retardation was admitted to our hospital. The first impression of the patient was: