

**Background** Atypical anti-psychotics have been found to be associated with hyperuricemia. The aims of this study were to determine the prevalence of hyperuricemia and metabolic adverse events in children and adolescents with ASD treated with risperidone.

**Methods** In this cross-sectional study, we recruited 127 Thai ASD children and adolescents aged 3–20 years receiving risperidone for more than 4 weeks. The clinical data and laboratory data were obtained and analyzed. Hyperuricemia was defined as serum uric acid > 5.5 mg/dL.

**Results** Hyperuricemia was present in 57.48% of total ASD patients treated with risperidone. Uric acid levels were significantly higher in adolescents as compared to children. Uric acid levels correlated with risperidone dose ( $P=0.01$ ), duration of treatment ( $P<0.0001$ ), BMI ( $P<0.0001$ ), waist circumference ( $P=0.003$ ), triglyceride (TG;  $P<0.0001$ ), triglycerides/high-density lipoprotein cholesterol ratio (TG/HDL-C;  $P<0.0001$ ), insulin ( $P=0.04$ ), homeostatic model assessment index (HOMA-IR;  $P=0.03$ ), high-sensitivity CRP (hs-CRP;  $P<0.0001$ ), and leptin levels ( $P<0.0001$ ). HDL-C and adiponectin levels were negatively correlated with uric acid levels ( $P<0.0001$ ). In multiple regressions analysis, age, BMI, TG/HDL-C, and adiponectin level remained significantly associated with uric acid levels ( $P<0.0001$ ).

**Conclusion** Hyperuricemia may play a role in metabolic adverse effects in children and adolescents with ASD receiving high dose and/or long-term treatment with risperidone.

**Disclosure of interest** The author has not supplied his/her declaration of competing interest.

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#### EW0585

### Effects of executive function stimulation in the language improvement of children with ASD

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The Autism Spectrum Disorder (ASD) is a neurobiological disorder that involves deficits currently classified into two areas:

- social communication and interaction across multiple contexts;
- restricted, repetitive patterns of behavior, interests or activities.

Although, these disorders do not have any causal relationship, both are always present. It has increasingly been sought methods aiming at the effectiveness of intervention for this population seeking to include all aspects. A promising research field is the one that considers the interdependence of the language and cognition areas, specifically regarding executive functions. This study was designed to verify the effectiveness of an executive functions stimulation program (EFS) during the regular speech-language therapy sessions and its impact in language development, specifically in the pragmatic aspects, through the evaluation of the functional profile of communication (FPC) in 14 children with ASD. During a 12-week period of regular speech-language therapy, the following areas were focused: working memory, cognitive flexibility, central coherence, inhibitory control and specific language aspects. Data were registered and analyzed statistically. The average performance of children in the stimulation was 85%, ensuring the effectiveness of EFS. The association analysis between pre- and post-EFS performance with FCP a significant improvement was observed in the occupation of the communicative space and the percentage of interactivity. These results are consistent with the hypothesis of the study, which believes in strong association between communication aspects and executive functions skills.

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#### EW0586

### Cytogenetic characteristic the patients of both sexes with phobic-anxiety disorders

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**Background and aims** Anxiety-phobic disorders are caused both by environmental and hereditary factors. The study was designed to determine the level of chromosomal aberrations in the peripheral blood lymphocytes (PBL) of children and adolescents of both sexes with phobic-anxiety disorders (PAD).

**Patients and methods** Cytogenetic analysis was performed in 27 children and adolescents of both sexes with PAD, aged 9–15 years; the control group consisted of 50 healthy peers of both genders. Statistical analysis-Excel and SPSS statistics 17.0.

**Results** Cytogenetic analysis of patients with PAD and in healthy age-matched individuals has established normal female (46,XX) and male (46,XY) karyotypes. The frequency of the chromosomal aberrations (CA) spontaneous level in the PBL is 4.6 times higher than the CA frequency in healthy persons. In children and adolescents with the disease, the spontaneous frequency of aberrations of chromatid and chromosome types is also significantly higher than the same in healthy children and adolescents. Single acentric fragments and exchanges prevail among the chromatid-type aberrations; pair acentric fragments prevail among the chromosome-type aberrations. An increase in the frequency of the chromosome-type aberrations has been revealed in boys with PAD (1.72 vs.0.55 per100 cells in healthy boys,  $P<0.001$  by pair acentric fragments), in comparison with healthy boys; and the chromatid-type aberrations have been observed in girls with PAD (3.22 vs.0.94 per 100 cells in healthy girls,  $P<0.001$  by single acentric fragments), in comparison with healthy girls. A pronounced individual variability of CA frequency, which ranges in our patients from 2.0 to 18.0 per 100 metaphase plates, has been found along with an increase in the CA level in patients with PAD.

**Conclusion** Children and adolescents with PAD require a careful cytogenetic analysis and the consequent therapeutic measures for genome stabilization.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EW0587

### Effect of adenotonsillectomy on attention-deficit/hyperactivity disorder symptoms, sleep disturbance symptoms, and quality of life of children with adenotonsillar hypertrophy and sleep-disordered breathing

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