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### EV308

#### Potential neurobiological ADHD biomarkers

M. Uzbekov\*, E. Misionzhnik

Moscow Research Institute of Psychiatry, Brain Pathology, Moscow, Russia

\* Corresponding author.

**Objectives** Pathogenetic mechanisms of hyperkinetic syndrome (HKS) or attention deficit hyperactivity disorder (ADHD) are not clear.

**Aim** To elucidate some aspects of monoamine involvement in pathogenesis of disorder and response of monoaminergic systems to psychostimulant medication.

**Methods** Levels of different monoamines, their metabolites and N-methylnicotinamide (end product of kynurenine pathway) were measured in daily samples of urine from children (7–11 years old) with mild and severe HKS using fluorimetric and chromatographic methods as well as platelet monoamine oxidase (MAO) activity. Thirty children with mild HKS received psychostimulant Sydnocarb 5–15 mg daily for 1–1.5 months (for ethical reasons children with severe HKS were not included in study).

**Results** HKS was accompanied by activation of dopaminergic and inhibition of noradrenergic systems. There were found metabolic differences between two forms of HKS. Compared with mild HKS, severe HKS was characterized by significant 2-fold increase of MAO activity and L-dopa, dopamine and adrenaline excretion. After sydnocarb treatment children's clinical status improved along with decrease of excretion of homovanillic, vanillylmandelic and 5-hydroxyindoleacetic acids and increase of N-methylnicotinamide. **Conclusions** Results indicate that dopaminergic and noradrenergic systems play important role in pathogenesis of HKS. Clinical improvement of HKS children was accompanied by significant increase of N-methylnicotinamide excretion. It is proposed that increased urine excretion of kynurenine metabolite–N-methylnicotinamide and N-methylnicotinamide/5-hydroxyindoleacetic acid ratio can serve as potential biomarkers for evaluation of efficacy of psychostimulant medication. We hypothesize that kynurenine system plays significant role in pathogenesis of HKS/ADHD.

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### EV310

#### Understanding of self-harm behaviour in adolescents

L. Santric<sup>1</sup>, A. Razic Pavicic<sup>2</sup>, A. Vuk<sup>3,\*</sup>, A. Tomac<sup>1</sup>

<sup>1</sup> Clinic for Psychological Medicine–University Hospital Center Zagreb, Child and adolescent psychiatry, Zagreb, Croatia

<sup>2</sup> Clinic for Psychological Medicine–University Hospital Center Zagreb, Adult psychiatry, Zagreb, Croatia

<sup>3</sup> Psychiatric Hospital 'Sveti Ivan', Adult psychiatry, Zagreb, Croatia

\* Corresponding author.

**Introduction** The incidence and prevalence of self-harm behaviour, with or without suicidal intent, is on the rise, both in other countries as well as in Croatia. Understanding the nature of patients who show self-harm behaviour can help us to better understand the components that contribute to their morbidity and mortality.

**Objectives** To expand the understanding of self-harm behaviour in adolescents as a contribution to the planning and implementation of preventive and curative programs.

**Aims** To explore the psychopathological characteristics of adolescents with and without self-harm behaviour who seek psychiatric help for their mental health problems.

**Methods** In this study participated 150 adolescents, aged 14–18 years, of which 52% showed some form of self-harm behaviour. During the initial examination of child and adolescent psychiatrist, participants completed self-reported questionnaires: functional assessment of self-mutilation (FASM, 1997) and the youth self report (YSR, 2001).

**Results** Statistically significant difference between groups of female adolescents with and without self-harm behaviour was observed in all of eight problem scales, while in male adolescents it was observed in five of them. This indicates considerably higher level of psychopathological features in the group of patients with self-harm behaviour.

**Conclusions** It is necessary to intensify monitoring of adolescents who show self-harm behaviour because of the overall level of psychopathological symptoms and the comorbidity which significantly complicates the therapeutic process. It is particularly important to continuously assess the suicide risk.

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### EV311

#### Resilience in children of depressed parents – a systematic review of protective factors

O. Wlodarczyk\*, A. Schramm, F. Metzner, S. Pawils

University Medical Center Hamburg-Eppendorf, Department of Medical Psychology, Hamburg, Germany

\* Corresponding author.

**Introduction** Children of depressed parents have an increased risk of developing mental disorders. While there are various studies concerning a pathogenetic perspective, fewer studies examined factors that protect mental health of these children. Knowledge about protective factors is necessary to establish prevention projects.

**Objectives** This systematic review gives an overview of protective factors for mental health of children of depressed parents.

**Methods** Databases PsycINFO, Embase, Medline, PSYINDEX, PubMed, ISI Web of Science, and CINAHL were searched for relevant studies in German or English published until August 2014. Targets were epidemiological studies concerning protective factors for children up to the age of 21 years who have at least one depressed parent. Selection process and assessment of methodological quality of the studies were conducted by two reviewers using a checklist.

**Results** Out of 3526 screened studies, finally thirteen studies were included. Efficient stress management strategies – in particular primary and secondary control coping – were identified as protective factors for mental health of affected children. Children's social competences as well as parental positive parenting skills also seem to have a protective impact. Restrictions to specific search terms, databases, and languages could have caused missing relevant studies with other characteristics. Limitations could also result from possible publication bias as well as methodological and qualitative differences regarding included studies.

**Conclusions** In the context of prevention projects, children of depressed parents should be supported in adequately and efficiently coping with stress. Moreover, practitioners should aim at the promotion of social competences and the involvement of parents within prevention.

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