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**Introduction:** Anorexia nervosa (AN) represents a severe mental disorder associated with cardiovascular complications leading to morbidity and mortality. Abnormal functioning of autonomic nervous system, particularly sympathetic nervous system, plays a crucial role in AN-linked psychopathology and cardiovascular diseases; however, the pathomechanisms are still unclear.

**Objectives:** Thus, we studied sympathetic arousal in response to mental stress using conventional parameters, and for the first time by spectral analysis of electrodermal activity with aim to detect non-invasive biomarkers for cardiovascular risk assessment already in adolescent AN patients.

**Methods:** Twenty-five AN girls were examined ( $14.8 \pm 0.4$  yr.) and age/gender matched controls ( $15.1 \pm 0.3$  years). Electrodermal activity (EDA) was continuously recorded at rest (5 min.) and in response to Go/NoGo test (5 min.). Evaluated parameters: skin conductance level (SCL) and spectral parameter of EDA in the sympathetic frequency band (EDASymp). EDA reactivity was calculated as percentual change (%) of SCL and EDASymp in response to stressor.

**Results:** The AN group had significantly reduced SCL and EDA-Symp compared to controls during baseline ( $p=0.041$ ,  $p=0.0001$ , respectively) and in response to Go/NoGo test ( $p=0.043$ ,  $p=0.017$ , respectively). The EDASymp index reactivity was significantly lower in AN group compared to control ( $p=0.034$ ).

**Conclusions:** Our study revealed resting sympathetic underactivity associated with lower reactivity to mental stressor indexed by EDA parameters in adolescent AN patients. This altered pattern of sympathetic arousal could play important role as a pathomechanism leading to cardiovascular complications in AN. It seems that EDA indices represent potential non-invasive biomarkers to detect AN-linked cardiovascular risk already at adolescent age.

**Conflict of interest:** This study was funded by the Slovak Scientific Grant Agency under grants VEGA 1/0044/18 and VEGA 1/0190/20 and Ministry of Health of the Slovak Republic under the project registration number 2018/20-UKMT-16.

**Keywords:** anorexia nervosa; electrodermal activity; sympathetic nervous system

## EPP0085

### The effect of vitamin C on sociability in a juvenile zebrafish pesticide-induced model of autism spectrum disorder

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**Introduction:** Autism spectrum disorder (ASD) is a multi-factorial disease characterized by impairments in social interaction, communication and repetitive behaviors. The necessity of developing an adequate treatment for ASD is essential. There is an increase in clinical studies assessing the positive effects of vitamins in ASD children. Vitamin C (vit. C) is implicated in biosynthesis of neurotransmitters and in protein metabolism.

**Objectives:** This study evaluated the possible effect of vit. C on zebrafish sociability after a single insecticide mixture administration as inductor for ASD.

**Methods:** A single dose of insecticide mixture ( $600 \mu\text{g L}^{-1}$  fipronil and  $600 \mu\text{g L}^{-1}$  pyriproxyfen) was administrated to zebrafish juvenile. Vit. C ( $25 \mu\text{g L}^{-1}$ ) was daily administrated during 14 days. A control group simulated the administration of insecticide mixture and vitamin. Each animal was tested in the experimental tank designed for the social interaction test. The trials were recorded and analysed using EthoVision XT 11 (NOLDUS, Netherlands). The locomotor activity parameters and the time spent next to the group were measured. Each trial had 4 minutes duration.

**Results:** We have found no significant differences in the average levels between pre-treatment and treatment days ( $P < 0.05$  ANOVA) regarding the locomotor activity parameters. Significant changes in sociability were observed for the group exposed to insecticide mixture and for vit. C group ( $P > 0.05$  ANOVA). It was also found that 14 days vitamin administration can lead to sociability improvements after a single administration of mixture insecticide.

**Conclusions:** The results of the current study bring some positive insights for the future of ASD therapy.

**Conflict of interest:** This work was co-funded by the European Social Fund, through Operational Programme Human Capital 2014-2020, project number POCU/380/6/13/123623, project title

**Keywords:** vitamin C; pesticide; autism spectrum disorder; sociability

## EPP0086

### Prenatal attachment & socio-demographic and clinical factors

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**Introduction:** A pregnant woman's bond with her fetus and the quality of the prenatal attachment can be determined by numerous variables.

**Objectives:** Determine the socio-demographic and clinical factors' effect on prenatal attachment.

**Methods:** We conducted a transversal descriptive study in a first line clinical practice center and in an university gynecology-