

## **P-1322 - OBJECTIVE EVALUATION OF PAIN AND $\beta$ -ENDORPHIN, SUBSTANCE P, CGRP BLOOD CONCENTRATION IN PATIENTS WITH SCHIZOPHRENIA**

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**Introduction:** Altered sensitivity to pain in schizophrenia has been described in literature, but the knowledge of this issue is insufficient.

**Objectives:** Case reports describing schizophrenia patients with painful medical conditions reported little or no pain. In all published studies except one, subjective test methods of pain were used.

**Aims:** The study assessed pain threshold using objective test method and relationship between concentration of  $\beta$ -endorphin, substance P, CGRP and pain insensitivity in schizophrenia. The influence of negative symptoms and cognitive disorders on pain sensitivity was evaluated.

**Methods:** 43 patients with schizophrenia, 5 healthy first degree relatives and 34 healthy volunteers were included in the study. All patients were in stable mental state and received neuroleptics. The concentration of  $\beta$ -endorphin, substance P, CGRP was measured and PANSS N, Trail Making Test and Stroop test were performed. To assess pain threshold nociceptive reflex test (RIII) was used.

**Results:** Concentration of  $\beta$ -endorphin and CGRP was 20% higher among patients compared with healthy subjects. Study groups did not differ in subjective and objective pain threshold. Negative correlation between Stroop Test performance and subjective pain threshold was found. Negative correlation between TMT performance and nociceptive reflex was observed. A strong negative correlation ( $p < 0.001$ ) between PANSS N scores and nociceptive reflex was found.

**Conclusions:** Patients with schizophrenia do not differ in objective pain threshold from healthy control. Insensitivity to pain could be the result of negative symptoms or working memory disorder. It is also possible that increased level of  $\beta$ -endorphin is related to hypoalgesia.