PW01-174 - **IMPAIRED FEAR CONDITIONING TO THERMAL PAIN STIMULI IN FIBROMYALGIA PATIENTS - AN EXPERIMENTAL STUDY**

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Objective: Pain is a complex experience that normally signals actual or potential tissue damage. Anticipatory anxiety to an unpredictable danger increases pain intensity and unpleasantness in healthy subjects. This study addressed the impact of anticipatory anxiety on pain perception in patients with chronic pain conditions for the first time.

Method: 28 female subjects with chronic pain (14 fibromyalgia (FM), 14 rheumatoid arthritis (RA)) and 14 age-matched healthy controls (HC) underwent differential Pavlovian delay conditioning. Conditioned stimuli included visual stimuli (simple black squares and triangles) and were paired with thermal stimuli of low temperatures (CS-), and in a pseudorandomized way in the other half of the trials with high ($CS+_{paired}$) or low temperatures ($CS+_{unpaired}$) of 6 sec duration. The conditioned response was measured by pain/anxiety self-rating and heart rate changes.

Results: Subjects of the RA and HC, but not the FM group, rated the pain intensity of the same stimulus (low temperature) significantly higher in the unpredictable condition ($CS+_{unpaired}$) than in the predictable condition (CS-). Mixed models analyses yielded a significant group-CS interaction with regard to anxiety, pain and heart rate in RA and HC, but not in FM

Conclusions: Results support impaired fear conditioning in FM including higher pain and anxiety perception even in save conditions compared to RA and HC. Since anxiety and anxiety-related behaviour may substantially contribute to the development and maintenance of chronic pain in FM, the results of this research may provide clues for further research in psychophysiology and psychological treatment in patients with FM.

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