Background: Anxiety sensitivity (AS), or fear of anxious arousal, has been shown to predict posttraumatic stress symptoms (PTSS) after campus shootings and analogue traumas. Sexual assault (SA) disproportionately impacts women and often results in prolonged PTSS. The prospective association between AS and PTSS has not been evaluated in SA survivors.

Methods: Women SA survivors \( \geq 18 \) years were enrolled at the time of emergency care. AS (ASI-3, abbreviated) and prior trauma exposure (LEC) were assessed one week after SA. PTSS severity (PCL-5) was evaluated one and six weeks after trauma exposure. Repeated measures mixed models were used to test the relationship between log-transformed E2 levels and CPMP. Secondary analyses of MVC cohort gene expression data \((n=37)\) evaluated mediating transcripts and associated biological pathways (Ingenuity, IPA).

Results: An inverse relationship between peritraumatic E2 and the development of CPMP was observed (\(\beta=−0.353, p=0.033\)) such that women with high E2 at the time of trauma had less CPMP over the following year. Secondary analyses identified 250 mRNA that mediated the relationship between E2 and CPMP; initial enrichment analyses identified eIF2alpha and CPMP trajectories in women.

Conclusions: Increased peritraumatic E2 levels predict improved CPMP outcomes in women.

Supported by: R01AR064700

Keywords: Peritraumatic, E2, Sexual Assault, Women, CPMP

Perturbation-Based Mapping of Subcallosal Cingulate With Deep Brain Stimulation: Cortical Oscillatory Dynamics to Confirm Target for Electrical Neuromodulation

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Background: Musculoskeletal pain is common following traumatic/stressful life events and is more common in women than men. However, resiliency factors that predict improved chronic posttraumatic musculoskeletal pain (CPMP) in women are poorly understood. In the current study, we examined whether peritraumatic circulating 17\(\beta\)-estradiol (E2) levels influence CPMP trajectories in women.

Methods: Peritraumatic E2 levels were measured via ELISA in plasma samples \((n=167)\) derived from three multiethnic longitudinal cohort studies of trauma survivors. These cohorts enrolled individuals experiencing motor vehicle collision (MVC, \(n=89\)), sexual assault \((n=64)\), and major thermal burn injury \((n=14)\). CPMP \((0-10\) numeric rating scale\) was assessed 6-weeks, 6-months, and 1-year following traumatic stress exposure. Repeated measures mixed models were used to test the relationship between log-transformed E2 levels and CPMP.

Conclusions: Increased peritraumatic E2 levels predict improved CPMP outcomes in women.

Supported by: K01AR071504; R01AR064700; R01AR060852; UNC BIRCWH K12HD001441

Keywords: Chronic Pain, Trauma, Estrogen, Women, Sex Differences

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