

S29. Targeting the Reconsolidation of Traumatic Memories With Electroconvulsive Therapy and Prolonged Exposure Therapy in Posttraumatic Stress Disorder

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Background: Traumatic memories are particularly persistent, which probably underlies the significant rates of treatment failure observed in Posttraumatic Stress Disorder (PTSD). We explored whether interventions for PTSD that also interfere with the reconsolidation of aversive memories, namely, Prolonged Exposure (PE) and Electroconvulsive Therapy (ECT), could have their effects augmented if delivered during the reconsolidation of the traumatic memories.

Methods: In study 1, subjects with PTSD were randomly assigned to receive two sessions PE therapy either after retrieving their traumatic memories (n=21) or a neutral memory (n=21). In study 2, severe, treatment-resistant PTSD received 6 sessions of ECT either after retrieving their traumatic (n=4) or a neutral memory (n=4). Skin Conductance Responses (SCR) and subjective reactivity (state scales for mood, anxiety and PTSD) to a recollection of their traumas were obtained both before and after the interventions in both studies.

Results: Reductions in reactivity to the traumatic imagery were pronounced if PE was preceded by traumatic retrieval in the case of SCR (p= 0.039), but not for subjective reactivity (p > 0.33) except for responses measured by one of the PTSD scales (IES-R), which was favorable to the neutral retrieval group (p = 0.034). Post traumatic-retrieval ECT tended to produce more pronounced reductions SCR and subjective reactivity to the traumatic imagery, reaching statistical significance when measured by the STAI state (p = 0.026) and a trend significance VASs and the state versions of the DTS and POMS.

Conclusions: Reconsolidation-based treatments are promising targets of investigation in PTSD, even for more complex cases.

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Keywords: PTSD - Posttraumatic Stress Disorder, Reconsolidation, Fear Memory, Modified Electroconvulsive Therapy (ECT), Exposure Therapy

S30. Posttraumatic Stress Disorder Onset and Inflammation-Related Biomarkers in Civilian Women

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Background: Research has linked PTSD with higher circulating levels of inflammation-related biomarkers, and effects may be bidirectional. Not only may PTSD lead to elevated inflammation, but inflammation may contribute to increased susceptibility to PTSD. We conducted the first investigation of new-onset PTSD and changes in inflammation-related biomarkers.

Methods: Data were from women in the Nurses' Health Study II. Biomarkers obtained at two blood draws, 10-16 years apart, included C-reactive protein (CRP), tumor necrosis factor-alpha receptor-II (TNFR2), intercellular adhesion molecule-1 (ICAM-1), and vascular cell adhesion molecule-1 (VCAM-1). PTSD was assessed via interview. Analyses compared biomarker levels in women with PTSD that onset between draws (n=175) to women with no history of trauma (n=175) and to women with history of trauma at draw 1 and no PTSD at either draw (n=175). We examined if PTSD onset was associated with biomarker change over time and if pre-PTSD-onset biomarker levels indicated risk of subsequent PTSD using linear mixed models and linear regression, respectively. Biomarkers were log-transformed.

Results: Compared to women without trauma, women in the PTSD onset group had larger increases in VCAM-1 over time (b=0.003, p=.068). They also had higher TNFR2 (b=0.05, p=.049) and ICAM-1 (b=0.04, p=.060) at draw 1 (before trauma/PTSD onset). However, pre-PTSD-onset biomarkers did not predict onset of more severe PTSD (bs: -0.26 to -3.58, ps: .272 to .918).

Conclusions: PTSD onset was associated with increases in one inflammation-related biomarker. Effects may be small and cumulative; longer follow-up with larger samples is needed. We did not observe strong support that pre-PTSD-onset biomarkers predicted subsequent PTSD risk.

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Keywords: Inflammation, PTSD, Endothelial Function, Biomarkers, Women

S31. Most Sexual Assault Survivors With Significant Posttraumatic Stress do not Receive Mental Health Care in the Initial Weeks After Assault

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Background: Little data exists regarding receipt of mental health care services by sexual assault (SA) survivors in the early aftermath of SA.

Methods: Women SA survivors ≥ 18 years of age who presented for emergency care within 72 hours of assault to one of the 12 sexual assault centers in the Better Tomorrow Network were enrolled. Six-week follow-up assessment included an evaluation of posttraumatic stress symptoms (PTSS, DSM-IV PCL, score ≥ 30 defined significant PTSS) and health care services received. Qualitative comments were collected regarding barriers to care.

Results: To date 411 women have been enrolled and 337/411(82%) have completed six-week follow-up assessment. 294/337 (91%) had significant PTSS at six weeks. The most common types of health care providers seen by women with significant PTSS were primary care providers (111/294 (38%)), mental health providers (93/294 (32%)), and OB/GYN providers (33/294 (11%)). The most common types of mental health care providers seen were psychiatrists (49/93 (53%)), psychologists (46/93 (49%)), and social workers (15/93 (16%)). Women with significant PTSS who saw a provider did not always disclose their SA: 26 (23%) did not tell their PCP, 4 (12%) did not tell their OB/GYN, and 3 (3%) did not tell their mental health provider. Qualitative comments regarding barriers to care will be summarized.

Conclusions: Nearly 7 in 10 women SA survivors with significant post-assault PTSS do not receive mental care services during the initial six weeks after assault. Efforts to develop and test early interventions in this population are needed.

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Keywords: Sexual Assault, Women's Health, PTSD - Post-traumatic Stress Disorder

S32. Psychological Resilience Following Sexual Assault Predicts Improved Mental Health Outcomes

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Background: Sexual assault (SA) occurs to one in five US women and is associated with a range of adverse neuropsychiatric outcomes, including posttraumatic stress and

depressive symptoms. Characteristics associated with increased psychological resilience in the early aftermath of SA remain poorly understood.

Methods: Biosex female women presenting for emergency care after SA were enrolled. Assessments one week after SA included evaluation of sociodemographic characteristics, psychological resilience (PR, 5 items from CIDI), and reported pre-SA health, including posttraumatic stress (PTS, abbpCL), depressive symptoms (PROMIS), anxiety symptoms (PROMIS), lifetime trauma (LEC), pain intensity (0-10 scale), and global mental and physical health (PROMIS). Assessments six weeks after SA included PTS (PCL-S), depressive symptoms, anxiety symptoms, and global mental and physical health.

Results: Among participants enrolled to date (n=422), 338/422 (80%) have completed six-week follow-up. Increased educational attainment was associated with increased PR, but not income. Increased PR one week after SA was associated with better pre-SA health: reduced PTS [$r=-.155(.003)$], depressive symptoms [$r=-.365(<.001)$], anxiety symptoms [$r=-.340(<.001)$], prior trauma [$r=-.136(.007)$], past pain [$r=-.130(.010)$], and improved global mental [$r=.456(<.001)$] and physical [$r=.290(<.001)$] health. Increased PR one week after SA predicted reduced depressive symptoms at six weeks [$r=-.141(.011)$] and increased global mental health [$r=.140(.005)$], but not reduced PTS or anxiety symptoms.

Conclusions: Increased PR one week after SA predicts reduced depressive symptoms and improved global mental health at six weeks. Reduced lifetime trauma and better pre-SA mental and physical health are associated with increased peritraumatic PR. Further studies are needed to better understand and augment resilience after SA.

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S33. The Effects of Early Life Stress on Fear Generalisation

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Background: Early life stress increases the risk of developing anxiety, and in this study we examined whether this might be due to the impact of early life stress on fear generalisation. Other research suggests that anxiety leads to greater generalisation, yet the relationship between early life stress has not been examined.

Methods: Rats were exposed to maternal separation (i.e., MS), a model for early life stress, where pups were separated from the dam on postnatal days 2-14, or reared as normal (i.e., standard reared, SR). In adulthood, rats received context conditioning and were tested for fear to the conditioning context or to a similar, but novel, context.

Results: SR rats showed higher levels of fear to the conditioning context compared to the similar context ($p=.01$), whereas MS rats displayed high fear to both contexts ($p>.05$) when tested the day after training. MS rats did discriminate