Tuesday, April 5, 2005

S-62. Symposium: Trauma- and stress-related disorders: New research findings

Chairperson(s): Michael Kellner (Hamburg, Germany), Christian Otte (Hamburg, Germany)
16.15 - 17.45, Holiday Inn - Room 3

S-62-01

Association between childhood trauma and catecholamine response to psychological stress in police academy recruits

C. Otte, T. Neylan, R. Yehuda, C. Marmar. *UKE Hamburg, Hamburg, Germany*

Objective: Childhood trauma is a risk factor for mood and anxiety disorders in adulthood. One possible mechanism for this association is an increased neuroendocrine response to stress in adults with a history of childhood trauma.

Methods: In a cross-sectional study, 76 police academy recruits (mean age 28 ± 5 years, 10 females) were exposed to a video depicting real-life officers exposed to highly stressful incidents. Salivary cortisol and MHPG (major metabolite of norepinephrine) were collected at baseline, immediately after the video, and twenty minutes after the video. Childhood trauma prior to age 14 was assessed with an interview (Life Stressor Checklist-Revised).

Results: Exposure to the video elicited significant MHPG and cortisol responses in both groups. Recruits with childhood trauma histories (n = 16) had a significantly greater MHPG response as evidenced by a group effect (F=8.0, p<. 01), and a group x time interaction (F=4.1, p < .05). The cortisol response did not differ between groups.

Conclusion: Police academy recruits with childhood trauma histories have an increased catecholamine response to psychological stress. This may serve as a risk factor for PTSD and future depression in recruits and these findings may generalize to other groups with a history of childhood trauma.

S-62-02

Long term health consequences: Relation of central nervous system hyperarousal and immune and hemodynamic indices in PTSD

D. G. Baker, T. Geracioti, N. Ekhator, J. Strawn, B. Dashevsky, H. Paul. *Cincinnati, OH, USA*

Objective: Both self-reported and objective measures of health suggest a link between trauma exposure and diminished health status, possibly mediated by Posttraumatic stress disorder (PTSD). There is evidence for increased cerebrospinal fluid (CSF) concentrations of corticotropin-releasing hormone (NE), norepinephrine (NE), cortisol and interleukin-6 (IL-6) in PTSD, but the relation between peripheral indices of health such as hemodynamics, metabolism, and immune function and the central hyperarousal observed in the disorder is yet to be fully explored.

Methods: We monitored blood pressure and measured plasma cytokines, while performing serial cerebrospinal fluid (CSF) sampling for six hours to determine CSF CRH and NE concentrations in men with combat-related PTSD and healthy men.

Results: CSF NE concentrations had been previously shown to be high in PTSD (Geracioti et. al. 2001). The CSF NE concentrations were strongly and positively correlated with mean diastolic blood pressure (BP) in the healthy controls (R=0.93, p<0.002) but not in the men with PTSD (R=0.10, p=0.77). Within individuals, diastolic BP was highly correlated over time in the healthy men, but poorly correlated in patients with PTSD. Conversely, pulse rate was highly correlated over time in the patients with PTSD, but not the healthy men. Although mean CSF IL-6 concentrations were increased in the men with PTSD as compared to healthy subjects, mean plasma concentrations did not signficantly differ by study group, and there was no signficant correlation between CSF CRH or NE and plasma IL-6 concentrations.

Conclusion: The chronic, fundamental pathophysiologic abnormalities in noradrenergic regulation of blood pressure observed in the PTSD may have long-term health consequences.

S-62-03

Early psychopathological consequences of rape in childhood

T. Kolesnichenko. *Chelyabinsk St. Med. Academy Dept. of Psychiatry, Chelyabinsk, Russia*

Objective: The data of 39 girls, aged 8 – 15, needed to be placed to the psychiatric station-ary after rape, is presented.

Methods: Clinical, psychopathological, pathopsychological, neuropsychological methods were used.

Results: In the first subgroup (32 girls, 8 – 14 years old) took place the acute stress reaction with the sense of horror, helplessness, and lack of conscious with psychomotor excitation or stupor in the first days after rape. As an acute reaction had come to its end, girls couldn't explain the sequence of events before rape in the proper way. All of them had a sense of shame and guilt. Clinically it resulted in the symptoms of depression, bewilderment, supervaluable self-abasement ideas, loose of appetite, and sleep disturbances. Some of them were afraid of staying home alone, or to come outdoors, etc. Further school adaptation problems, obsessive memories, nightmares and the reaction to someone's reminding of the traumatic event had appeared. In 14 cases it came to former PTSD. Another subgroup (7 girls, 13 – 15 years old) had shown no changes in psychical status. Before the excess, girls acted for the long time in antisocial teen groups. At the time of abuse, these girls were under alcohol intoxi-cation. Three of them were intellectually backward, and the rest had the initiation of antisocial personality disorder.

Conclusion: This findings show the necessity of adequate medical and psychological help to the victims of rape and sexual abuse in childhood according to personality specifics, in order to improve therapeutic strategies.

S-62-04

Anxiety in combat-related posttraumatic stress disorder

N. Atamanova. *Chelyabinsk St. Med. Academy Dept. of Psychiatry, Chelyabinsk, Russia*

Objective: Anxiety syndrome features in combat-related PTSD were investigated in 54 males, aged 20 – 45, with full-criteria DSM-IV PTSD. Fifty-five troop-mates of dis-tressed combatants, equal in age, military rank, and battle exposition, non-symptomatic, were observed as controls.

Methods: Clinical, psychopathological, pathopsychological, neuropsychological methods were used.

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Results: The thing is that emotional supression is common in combatants. So, the expression of anxiety, as well as other "restricted" emotions in PTSD group is too devaluated. Never the less, differentiation between horror, fear and anxiety was possible in this group. Clinically, anxiety made the syndrome more abstractive and "endogenous", while non-anxious PTSD was more concrete, "exogenous" and classic. Pathopsychologically, significant differences in anxiety levels (A Beck scale; DV Sheehan scale and CD Spielberger inventory) appeared between anxious, non-anxious PTSD groups, and controls, as the suppression went by. Significant differences between PTSD group and controls were also detected in such personality traits, as emotiveness and imbalance (K Leonhard inventory).

Conclusion: This data provides new evidence in understanding the role of anxiety in patho-morphosis of PTSD.

S-62-05

Brain imaging, neurocognition, and HPA status in PTSD

T. Neylan, C. Otte, M. Weiner, C. Marmar. *Univ. of CA, San Francisco Psychiatry, San Francisco, USA*

Objective: Previous studies have suggested that PTSD is associated with hippocampal volume loss, deficits in memory, learning, and attention, and altered HPA function. Because individuals with PTSD often have comorbid alcohol abuse diagnoses, the extent to which the confounding effects of alcohol abuse are responsible for these findings is a growing concern for PTSD researchers.

Methods: Our study controls for this potential confound of alcohol abuse by comparing structural brain imaging and MR spectroscopy, neuropsychological test scores, and the dexamethasone suppression test from participants in four groups: current PTSD and a history of alcohol abuse in the past five years (n = 30), current PTSD without history of alcohol abuse (n = 37), no lifetime PTSD and with alcohol abuse (n = 30) and no lifetime PTSD or alcohol abuse (n = 31).

Results: There were no significant effects of PTSD or alcohol abuse on hippocampal volume. PTSD was associated with reduced N-Acetyl Aspartate/Creatine (NAA/Cr) on the left hippocampus [F = 5.0; p = 0.028) but not on the right side. There was no main effect of alcohol or alcohol/PTSD interaction effect on NAA/Cr. After controlling for education, there was an overall main effect of PTSD on measures of verbal memory and attention, and no main effect of alcohol or interaction effect. After covarying for attention, verbal memory differences between PTSD and controls remained. There was no association with verbal memory and attention on brain imaging or spectroscopy. Results of dexamethasone suppression test are pending and will be presented.

Conclusion: PTSD and history of alcohol abuse was not associated with hippocampal volume loss in this study. PTSD was associated with reduced NAA/Cr in the left hippocampus. History of alcohol abuse does not account for deficits in verbal memory and attention in PTSD.

Wednesday, April 6, 2005

S-70. Symposium: Posttraumatic stress disorders and quality of life after intensive care treatment

Chairperson(s): Hans-Peter Kapfhammer (Graz, Austria), G. Schelling (München, Germany)
08.30 - 10.00, Holiday Inn - Room 2

S-70-01

Epidemiology and course of cardiac surgery-related PTSD

H. B. Rothenhäusler. *Graz, Austria*

Objective: Little is known concerning the natural history of posttraumatic stress disorder (PTSD) in cardiac surgery patients. There have been only two postal studies in which PTSD symptomatology was investigated in patients who had undergone coronary artery bypass graft (CABG) or aortic valve replacement (AVR). The aims of our study were to examine, with a 1-year prospective design, psychiatric morbidity in patients who had undergone cardiac surgery with cardiopulmonary bypass (CPB), with a particular emphasis on the incidence and course of in-hospital PTSD symptomatology.

Methods: In a prospective study, we followed up for 1 year 30 of the original 34 patients who had undergone cardiac surgery with CPB. Patients were assessed preoperatively, before discharge, and at 1 year after surgery with the Structural Clinical Interview for DSM-IV. Delirium Rating Scale (DRS) was used daily over the course of ICU treatment.

Results: At baseline, 8.8% (n=3) of the entire sample (N = 34: mean age: 68.2 ± 9.7 yrs, men: 64.7%; CPB time: 124.5 ± 52.1 min; ICU stay: 3.1 ± 1.7 days) met criteria for a lifetime diagnosis of PTSD. During ICU treatment, postoperative delirium developed in 32.4% (n=11) of the sample but recovered quickly within 3 days or less. At discharge, 17.6% (n=6) of the sample met the criteria for an acute full in-hospital PTSD. The diagnostic status of in-hospital PTSD was linked to postoperative delirium ($p < 0.05$). One year after surgery, out of the 6 patients showing full PTSD at discharge, 3 patients fully and 2 patients partially remitted by 12 months, and 1 patient was unavailable for 1-yr-f/up. Of the 5 followed up cases of in-hospital PTSD, 3 received psychotherapy after surgery, and remission of PTSD was noted in 2 of them.

Conclusion: We should highlight the importance of assessing psychiatric morbidity before cardiac surgery, the need for rapid diagnosis and treatment of postoperative delirium and the importance of detecting and treating cardiac surgery-related PTSD at an early stage in order to avoid the negative long-term outcomes that have generally been attributed to PTSD following medical illness and treatment.

S-70-02

Medical disorders as a cause of psychological trauma and PTSD

H.-P. Kapfhammer. *Klinikum Graz, Graz, Austria*

Objective: At the beginning, PTSD research was primarily focused on war veterans and victims of bodily assault or rape. Starting in the early 90s, PTSD after civilian traumas such as motor vehicle accidents was diagnosed increasingly more often. Recent publications showed that PTSD can also follow serious somatic diseases.

Methods: Survey is given on published studies exploring the incidence of posttraumatic disorders after severe medical states and associated treatment modalities.

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