Munich Intensive Care Outcome Study Group

Physical, Cognitive and Emotional Consequences of Critical Illness and Extreme Stress Exposure

Glucocorticoid - System
Endocannabinoid - System
Catecholaminergic - System

Ludwig - Maximilians University Munich, Germany

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Description

The purpose of our study group is to conduct outcome research in after intensive care treatment or other causes of extreme stress exposure. Our group currently focuses on emotional, cognitive and behavioural functioning of patients and individuals during and after an extreme stress exposure. Individuals studied include long-term survivors of sepsis, trauma and shock, patients during and after cardiac surgery, patients with stress-related chronic wide spread pain but also volunteers participating in isolation experiments, astronauts, parabolic flights or scientists working and living in Antarctic environment. Current clinical and experimental studies investigate the hormonal regulation of the stress response with a particular focus on traumatic memory. Neurobiologic systems we study include the catecholaminergic, the glucocorticoid and the endocannabinoid system as well as the interaction between these systems with regard to traumatic memory and stress-related disorders such as post-traumatic stress disorder (PTSD) or fibromyalgia. Furthermore, we increasingly study the effects of genetic single nucleotide polymorphisms (SNPs) on outcome of severe stress.

As the population ages, the field of intensive care advances and the incidence of highly aversive events in the general population increases, it becomes more important to optimize outcome of extreme stress exposure and critical illness.

The aims of the Munich Intensive Care Outcome Study Group

1. To expand scientific knowledge and serve as a centre of research in the areas of outcomes after extreme stress and after ICU treatment.

2. To increase the understanding of basic neurohumoral mechanisms of traumatic memories and chronic stress disorders in patients after highly aversive experiences with the aim of developing approaches to prevention and treatment.

3. To disseminate research findings to the scientific community, health care policy makers, health-care providers, and members of the general public.

4. To assist clinicians in improving the quality and cost-effectiveness of patient care based on scientific evidence found in our investigations.

5. To improve and validate the methodology used to measure outcome including health-related quality of life and emotional, cognitive and behavioural functioning in patients after intensive care or extreme stress exposure.
Current Ongoing Clinical Studies and Trials

- **Effect of Analgesia and Sedation on Outcome of Intensive Care Therapy (DFG Sche 573)**
- **Low-Dose Hydrocortisone for Fibromyalgia (ClinicalTrials.gov Identifier: NCT00236925)**
- **Glucocorticoid-Endocannabinoid Interaction in Patients undergoing Cardiac Surgery (ClinicalTrials.gov Identifier: NCT00490828)**
- **Diffusion Tensor Imaging Magnetic Resonance Imaging in Patients with Stress-Related Disorders**
- **Long-term Outcome of Catastrophic ARDS**

Major publications related to the field


Scientific Meetings and Workshops

Workshop Munich 2006: Emotional Memory Regulation by Stress Hormones and Endocannabinoids

Workshop Munich 2005: Glucocorticoids and Endocannabinoids in the Amygdala


Workshop Munich 2000: Stress und Stresshormone, traumatische Erinnerungen und posttraumatische Belastungsstörungen nach Intensivtherapie

Major grants

- Else Kröner-Fresenius Foundation
- Deutsche Forschungsgemeinschaft (Sche 573)
- Eli - Lilly International Foundation

Prizes and Awards

- Prize Award, Kongress der Deutschen Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde 2000.
- Prize Award, 10th European Congress on Intensive Care Medicine 1997.
- Prize Award, 9th European Congress on Intensive Care Medicine 1996.

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