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Cognitive and neuropsychological disorders in neuroimmunological diseases

The close interrelationship between the nervous, endocrine and immune systems has become a major challenge for interdisciplinary co-operation of researching and practising neurologists, psychiatrists, psychologists and immunologists with special impact for psychosomatic medicine. Newly developed neuropsychologic, immunologic and imaging methods have provided deeper insight into the mechanisms of neuro-immune interactions with practical consequences for the treatment of neurological and psychiatric disorders. For example, it has been highlighted how immunological effects of psychosocial distress and maladaptive coping behaviour can exacerbate diseases.

Based on contributions and discussions at the VIth Baltic Symposium on Clinical Neuroimmunology held in Rostock-Warnemünde the present review articles provide a broad spectrum of state-of-the-art information on major aspects of the fields of neuro-immune interaction and psychoimmunology. The chapters cover current knowledge on the topographic pathology of compartmentalised neuro-inflammation, basics of neuroimmunology and neuropsychology including conditioned immunomodulation and diagnostic aspects such as measurement of cognition, emotion and behaviour, neuropsychologic test batteries and screening methods, whereby aspects of quality assurance are also consid-

ered. In addition, new findings on imaging investigations from sonography to functional brain imaging are presented. A subsequent series of articles addresses psychological impairments such as cognitive insufficiency, emotional disturbance and behavioural abnormalities as well as psychiatric disorders such as major depression accompanying neuroimmunological diseases with emphasis on multiple sclerosis. The influences of conventional immunomodulatory and immunosuppressive therapy and symptomatic treatment on the cognitive performance as well as coping strategies in multiple sclerosis including alternative and complementary therapies are also regarded. Separate chapters deal with immunoneuropathies, myasthenia gravis as well as infectious, paraneoplastic and vascular diseases of the nervous system. Attention is also paid to expert evaluation and rehabilitation of neuroimmunological diseases. Finally, first investigations on a model of self-management in multiple sclerosis are presented.

We hope that the present comprehensive survey of the field of psychoneuroimmunology and related areas of neuroimmunology will stimulate further research and innovative treatment improving the coping behaviour of our patients.

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