EDITORIAL

Current Pharmaceutical Trends in Neuroimmunology – Part II: Autoimmunity Beyond the CNS and Other Disorders

In addition to the central nervous system (CNS) [1], the peripheral nervous system (PNS), muscles, and various organ systems can be affected by neuroimmunological disorders. Due to anatomical conditions, there are major differences in the interaction of the immune system and the efficacy of immunotherapies in different tissues, so findings from the CNS cannot be transferred one-to-one to other tissues such as PNS or muscle.

In part 2 of Current Trends in Neuroimmunology, Lehmann's research group [2] focuses on current therapeutic options for chronic inflammatory polyneuropathy (CIDP). In addition to established therapies such as corticosteroids, immunoglobulins, plasmapheresis, and other immunosuppressants, new therapeutic options currently being tested are discussed. In particular, recombinant Fc multimers will be addressed.

Myopathies and myositides are rare disorders in which the immune system plays a primary or secondary role in their progression, respectively. In recent years, considerable progress has been made in understanding the pathogenesis of these diseases, and non-inflammatory mechanisms have been described in addition to the involvement of the innate and adaptive immune systems. The review by Glaubitz et al. provides an overview of the pathogenesis and deriving therapeutic options for the daily clinical practice [3].

Systemic lupus erythematosus (SLE) is a chameleon in medicine and can take on different shapes and colors. However, because SLE can also affect the nervous system, it is inevitable that neurologists will be involved with this disease. In their paper ‘Neuropsychiatric systemic lupus erythematosus: a remaining challenge’, a group of researchers in Vienna addresses the dreaded neurological complications [4]. The paper discusses the difficulties in diagnosis, differentiation from other diseases, and therapeutic interventions.

Few new therapeutic options have generated as much excitement as the gene therapies approved for spinal muscular atrophy (SMA). SMA has a genetic cause and is accompanied by primarily non-inflammatory changes. Gene therapies have enabled an entirely new treatment option that significantly improves and stabilizes affected individuals. There are limited data on treatment in adults. This article by Hagenacker's group [5] provides an overview of SMA, treatment options, and study results.

This section of the special issue introduces us to new therapeutic advances, that will revolutionize medicine, especially the treatment of rare diseases. Despite these sometimes epoch-making advances, the difficulties are also highlighted, such as the lack of data on gene therapy in adult patients with SMA. What is missing in all diseases is the question what long-term outcomes to aim for, when to start therapy and when to stop. There is a myriad of advances in all of these diseases, but further collaboration and multicentre studies are needed, including the definition of prognostic markers and outcome parameters.

REFERENCES


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