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DEMYELINATION OF THE CENTRAL AND PERIPHERAL NERVOUS SYSTEM: A CASE REPORT

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Inflammatory demyelinating diseases such as multiple sclerosis (MS), neuromyelitis optica (NMO), acute disseminated encephalomyelitis (ADEM), acute inflammatory demyelinating polyradiculoneuropathy (AIDP), and chronic inflammatory demyelinating polyneuropathy (HIDP) are autoimmune diseases that affect the peripheral or central nervous system. In rare instances, demyelination may damage simultaneously the peripheral and central nervous system. Peripheral and central myelin have different protein components, but they also have some common ones such as myelin basic protein (MBP), myelin-associated glycoprotein (MAG), and neurofascin. Therefore, abnormal autoimmune responses against common antigens are suspected in the pathogenesis of demyelinating diseases with simultaneous central and peripheral nervous system involvement (1-3).

In this paper, the case of a female patient was presented, whose neurologic finding showed the signs of peripheral and central nervous system damage existent at the same time, which was confirmed using electroneuromyography and magnetic resonance imaging of the brain. In terms of differential diagnosis, we took into consideration AIDP, HIDP, and other acquired demyelinating polyneuropathies that can occur concurrently with central nervous system demyelination and are very rare entities.

In our female patient, the final diagnosis was made of a rare form of acute inflammatory demyelinating polyneuropathy with central nervous system demyelination. Establishing the final diagnosis was a key step in the management of the patient, since treatment protocols differed in the above demyelinating diseases.

Further research should focus on autoantibodies targeting directly the common myelin epitopes in the Schwann cells of the peripheral nervous system and oligodendrocytes of the central nervous sustem (21). *Acta Medica Medianae 2017;56(1):39-43.*

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