PARANEOPLASTIC SENSORY NEUROPATHY: CLINICAL FEATURES, DIAGNOSIS, AND TREATMENT

Stavila Ion[1], Istrati Nina[1]
[1]Department of Neurology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

Introduction. Paraneoplastic sensory neuropathy (PSN) is a phenotype within the spectrum of paraneoplastic neurological syndromes, characterized by the destruction of sensory neurons located in the dorsal root ganglia. The most common underlying cause is small-cell lung cancer (SCLC), which is associated with PSN in approximately 85% of cases, frequently in the presence of anti-Hu antibodies.
Materials and Methods. This study consists of a descriptive analysis of the scientific literature published between 2013 and 2024. The sources reviewed included databases such as PubMed, Google Scholar, ScienceDirect, and relevant review articles.
Results. The clinical course of PSN is typically subacute and rapidly progressive over several weeks. The main symptoms include asymmetric numbness affecting the upper or lower limbs. All types of sensory modalities may be impaired, including vibration sense and proprioception. Deep osteotendinous reflexes are usually absent. Patients may also present with severe pain, allodynia, paresthesia, and signs of sensory ataxia. The diagnosis of PSN includes three levels of certainty based on the "**PNS-Care Score"**, which takes into account the clinical phenotype, the presence or absence of neuronal antibodies, and the presence or absence of an underlying malignancy. Detection of serum antibodies such as anti-Hu, CV2/CRMP-5, and amphiphysin-IgG may support the diagnosis; however, approximately 16% of cases are seronegative. In seronegative forms, mitochondrial apoptosis associated with oxidative stress may contribute to the pathogenesis, resulting in the release of autotoxins and subsequent demyelination of peripheral nerves. Immunomodulatory therapy may be beneficial in both seropositive and seronegative forms, as well as in the management of the underlying malignancy.
Conclusions. PSN represents a severe neurological disorder in which early recognition is essential for identifying an underlying neoplasm and initiating appropriate treatment. Further studies are required to validate new therapeutic strategies.
Keywords: paraneoplastic sensory neuropathy, antibodies, sensory neurons, sensitivity.