

FIRST-LINE PHARMACOTHERAPY OF CHEMOTHERAPY-INDUCED PERIPHERAL NEUROPATHY

Dane Krtinić^{1,2}, Aleksandra Lučić-Prokin^{3,4}, Irena Conić^{2,5}, Mirjana Todorović-Mitić², Milica Radić^{2,5}, Iva Binić^{6,7}, Miodrag Cekić⁸, Hristina Jovanović¹, Hristina Trajković¹, Milan Čevrljaković²

Chemotherapy-induced peripheral neuropathy (CIPN) is a very common adverse event iatrogenically caused by the administration of neurotoxic chemotherapy protocols in oncology patients. Of the chemotherapeutics—oxaliplatin, cisplatin, carboplatin, docetaxel, paclitaxel, vinblastine and vincristine—bortezomib shows the greatest neurotoxicity. Recommendations for the first line of pharmacotherapy of this side effect of chemotherapy are gabapentinoids (pregabalin and gabapentin), antidepressants (amitriptyline, duloxetine, venlafaxine, desvenlafaxine), as well as topical application of lidocaine. Adequate pharmacotherapy of CIPN implies an individualized approach for each patient and compliance with guidelines for recommended first-line pharmacotherapy, first, in the form of monotherapy and later, depending on tolerability and achieved analgesic response, in the form of polytherapy with first-line drugs. If there is no adequate analgesic response to polytherapy with first-line drugs, only then is it necessary to switch to the second line of therapy. Treatment of CIPN leads to an adequate quality of life due to the reduction of the neuropathic component of pain, a reduction in depression and anxiety and the expected completion of the planned chemotherapy cycles, and consequently, a better prognosis of the underlying oncological disease of these patients.

Acta Medica Medianae 2025;64(4):123–129.

Key words: chemotherapy, peripheral neuropathy, pharmacotherapy

¹University of Niš, Faculty of Medicine, Department of Pharmacology and Toxicology, Niš, Serbia

²University Clinical Center Niš, Clinic of Oncology, Niš, Serbia

³University of Novi Sad, Faculty of Medicine, Novi Sad, Serbia

⁴University Clinical Center of Vojvodina, Clinic of Neurology, Novi Sad, Serbia

⁵University of Niš, Faculty of Medicine, Department of Oncology, Niš, Serbia

⁶University of Niš, Faculty of Medicine, Department of Psychiatry and Medical Psychology, Niš, Serbia

⁷University Clinical Center Niš, Clinic of Psychiatry, Niš, Serbia

⁸University Clinical Center Niš, Clinic of Cardiology, Niš, Serbia