Neurotoxic Side Effects Early in the Oxaliplatin Treatment Period in Patients With Colorectal Cancer

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Few studies have examined the experiences of patients with colorectal cancer (CRC) with oxaliplatin-induced neurotoxicity early in the chemotherapy treatment period and how these experiences affect their daily lives. Postoperative adjuvant chemotherapy consisting of 5-fluorouracil in combination with folinic acid (leucovorin) is an established treatment for patients with locally advanced CRC or with regional lymph node metastases. This regimen has relatively low toxicity, and most patients with cancer cope with it without troublesome side effects. By adding oxaliplatin, the relapse rate can be reduced by about 25%; however, the risk of side effects increases (Land et al., 2007). Oxaliplatin can cause acute and chronic neurotoxicity (e.g., cold sensitivity; numbness; tingling in the hands, feet, and face; pain) (Cavaletti & Marmiroli, 2015; Vatandoust et al., 2014).

Another aspect of importance is that a correlation exists between the severities of acute and chronic neurotoxic side effects. Hyperacute neurotoxic side effects can be a predictor of oxaliplatin-induced persistent neurotoxicity (Tanishima et al., 2017).

Studies have shown that chronic neurotoxicity affects patients’ health-related quality of life (Bakitas, 2007; Toft Hansen, Donovan, Morgan, Shibata, & Yeh, 2013; Toft Hansen, McAllister, & McMillan, 2011). The number of people with CRC has increased, and more people with CRC are benefitting from adjuvant therapy (Seretny et al., 2014). The severity of neurotoxic side effects depends on the dose and duration of chemotherapy; consequently, the dosage of oxaliplatin is often reduced or treatment is stopped because of the fear of debilitating and prolonged neurotoxicity (de Gramont et al., 2007; Vatandoust et al., 2014).

To improve well-being during therapy, dose reduction could be useful in practice for patients who exhibit moderate or severe neurotoxicity during treatment.