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

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PURPOSE: To identify and describe experiences of patients with colorectal cancer (CRC) who have neurotoxic side effects early in the oxaliplatin treatment period, and how neurotoxicity affects their daily lives.

PARTICIPANTS & SETTING: 10 patients with stage II–III CRC were included. All were treated with adjuvant oxaliplatin postoperatively and assessed neurotoxicity via a platform-independent mobile phone–based system. Patients were recruited from two hospitals in southern Sweden from November 2013 to August 2014.

METHODOLOGIC APPROACH: Qualitative interview study conducted through open-ended, face-to-face, qualitative interviews. Thematic analysis was used.

FINDINGS: A main theme was identified: "Endure neurotoxic side effects." This theme illuminated how patients adapt to manage daily life. Patients' daily lives, as well as their psychosocial well-being, were affected. Patients changed their daily routines and reprioritized activities.

IMPLICATIONS FOR NURSING: Nurses have an obligation to communicate the importance of early detection of neurotoxicity. Mobile phone technology seems to be a valuable tool for monitoring patient-reported neurotoxicity to improve communication and supportive care.

KEYWORDS chemotherapy; colorectal cancer; daily life; neurotoxicity; qualitative methodology

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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; Tofthagen, Donovan, Morgan, Shibata, & Yeh, 2013; Tofthagen, 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.