

<https://doi.org/10.29289/259453942021V31S2031>

RISK FACTORS FOR PERIPHERAL NEUROPATHY INDUCED BY CHEMOTHERAPY IN WOMEN WITH BREAST CANCER AND THEIR CORRELATION WITH QUALITY OF LIFE: A SYSTEMATIC REVIEW

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Objective: Chemotherapeutic-induced peripheral neuropathy is one of the most common side effects of breast cancer treatment. Such a condition impacts on quality of life and has repercussions in treatment. The aim of this study was to correlate, by literature review, the risk factors and impact of peripheral neuropathy in women with breast cancer treated with taxanes. **Methodology:** This is a systematic review to assess the risk factors associated with peripheral neuropathy related to taxane. The literature review consisted of searching the MEDLINE database. The terms used were “neuropathy” or “chemotherapy” or “breast cancer” or “taxane,” using filters in accordance with the inclusion criteria. Only randomized controlled clinical trials were included in the selection, with full text available in the database, in English, published in the last 5 years, with women above 19 years old with breast cancer. **Results:** Six trials were included in this literature review. In total, 3,026 patients were evaluated and the main outcomes were to assess the main risk factors related to the short- and long-term effects of chemotherapy-induced peripheral neuropathy. Bandos et al. showed 41.9% of peripheral neuropathy within 2 years after starting treatment. Quintela et al. showed that patients with telomeric shortening had more toxicity related to paclitaxel. Hagoiwaru et al. showed that peripheral neuropathy influenced lower scores on the quality of life scale. Ciruelos et al. showed greater delay and dose reduction in patients with neuropathy. Lam et al. showed a rate of neuropathy grade ≥ 1 in 67% of women. **Conclusions:** The results include presenting symptoms of peripheral neuropathy before the start of chemotherapy, the cumulative dose of the taxane agent, female gender, advanced age, body surface area, and hyperglycemia predispose to taxane-induced peripheral neuropathy. The heterogeneity between individuals with regard to susceptibility to taxane-induced peripheral neuropathy can be attributed to individual genetic differences.

Keywords: Breast Cancer; Neuropathy; Chemotherapy.