Abstract:

Objective: Oxaliplatin is a cytotoxic agent frequently used in the treatment of gastrointestinal cancer patients. A known side effect of oxaliplatin administration via a peripheral vein is infusion-related pain. In this retrospective cohort study we compared the incidence of infusion-related pain in patients treated with oxaliplatin with or without simultaneous fluid infusion (FI) (800 mL glucose 5% in 2 hours).

Methods: We retrospectively defined two cohorts: Patients treated with oxaliplatin and simultaneous intravenous FI and the same number of patients treated without FI. The incidence of infusion-related venous pain was the primary outcome measure. Secondary outcomes included: Incidence of hypersensitivity reactions, infusion time, dose density, number of patients switched to a central venous catheter and incidence of peripheral neuropathy.

Results: 100 patients were included, 50 patients in both groups. Baseline characteristics were comparable, except for age (median 66.8 vs 62.4 years in groups with and without FI; p=0.017), and body mass index (28.0 vs 25.7 kg/m2, respectively; p=0.012). Patients treated with simultaneous FI experienced significantly less vascular pain compared with those without FI (10% vs 78%, respectively; p<0.0001; OR 0.031 (95% CI: 0.01 to 0.098)). No difference was observed in dose density, treatment delay or the need of central venous catheter. Logistic regression analysis showed no confounders affecting the primary outcome. No adverse events of FI were observed.

Conclusion: Concurrent infusion of 800 mL glucose 5% with peripheral venous administration of oxaliplatin significantly reduces the incidence of infusion-related pain in gastrointestinal cancer patients and is highly feasible and affordable in everyday clinical practice.

Reference: