Is Ondansetron More Effective Than Granisetron for Chemotherapy-Induced Nausea and Vomiting? A Review of Comparative Trials

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Nausea and vomiting are two of the most distressing side effects of chemotherapy. Guidelines recommend the use of 5-HT³ receptor antagonists as a pharmacologic intervention for acute and delayed nausea and vomiting for moderately and highly emetogenic chemotherapy. Although newer antiemetics and 5-HT³ receptor antagonists are available, ondansetron and granisetron still are used widely. A review of the literature was conducted to identify trials that compared the antiemetic efficacy of ondansetron and granisetron. Studies were identified by searching the PubMed®, EMBASE™, Ovid MEDLINE®, CINAHL®, and Evidence-Based Medicine Reviews databases. The six studies reviewed in this article were either a meta-analysis; a randomized, controlled trial; or another type of research study published from 2000 to date. The results reported in the studies reveal that ondansetron and granisetron have equal antiemetic efficacy in reducing or eliminating chemotherapy-induced nausea and vomiting (CINV), with the evidence classified as good based on U.S. Preventive Services Task Force criteria for judging the strength of the overall evidence. Although side effects of ondansetron and granisetron have been reported, they normally are mild and of brief duration, not severe or lasting enough to warrant discontinuation.