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Clinical update on palonosetron in the management of chemotherapy-induced nausea and vomiting

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ABSTRACT

The need to control chemotherapy-induced nausea and vomiting is continuously stimulating research to find better options for the optimal antiemetic care. Palonosetron is different from conventional serotonin receptor antagonists not only by the fact of having a longer half-life but also by higher binding affinity for serotonin receptors. It is the first agent in the class which is approved for preventing both delayed and acute emesis induced by moderately emetogenic chemotherapy. Recent studies using palonosetron-based antiemetic regimens, as well as in the clinical setting of multiple-day chemotherapy, have been reported. Palonosetron plus dexamethasone given as a pre-treatment infusion was effective for preventing acute and delayed emesis after moderately emetogenic chemotherapy. Palonosetron in combination with dexamethasone and aprepitant was highly effective in preventing emesis in the days following administration of moderately emetogenic chemotherapy. Treatment was well tolerated, with no unexpected adverse events. Multiple-day dosing of palonosetron plus dexamethasone was safe and effective for prevention of emesis induced by 5-day cisplatin-based chemotherapy. There was no evidence of cumulative toxicity when palonosetron was given three times over 5 days. Further evidence from ongoing clinical trials with palonosetron with or without dexamethasone will be available soon. Palonosetron represents an useful addition to the therapeutic armamentarium for the management of chemotherapy-induced nausea and vomiting. Further studies are needed to assess the effectiveness of palonosetron in combination with dexamethasone compared with that of older serotonin receptor antagonists combined with dexamethasone. However, palonosetron may offer advantages of convenience over the short-acting older antagonists due to its ability to be given as a single intravenous dose prior to chemotherapy.

Key words: antagonist, antiemetics, chemotherapy-induced nausea and vomiting, palonosetron.

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