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**Format:** AbstractDrugs. 1996 Nov;52(5):773-94.**Ondansetron. A review of its pharmacology and preliminary clinical findings in novel applications.**Wilde M<sup>1</sup>, Markham A.**Author information****Abstract**

The use of ondansetron, a selective serotonin 5-HT<sub>3</sub> receptor antagonist, is well established in patients with nausea and vomiting associated with cancer chemotherapy, radiotherapy or anaesthesia and surgery. The wide distribution of 5-HT<sub>3</sub> receptors in the body and the role of these receptors in disease have provided the rationale for investigation of ondansetron in novel applications. Preliminary data have shown ondansetron to have clinical benefit in patients with nausea and vomiting associated with drug overdosage or poisoning, anti-infective or antidepressant therapies, uraemia or neurological trauma, and in patients with pruritus. Patients with gastrointestinal motility disorders (e.g. carcinoid syndrome, irritable bowel syndrome, diarrhoea associated with cryptosporidiosis or diabetes, and chronic refractory diarrhoea) have also shown some improvement when treated with ondansetron, as have patients with certain pain or CNS-related disorders [e.g. alcohol (ethanol) dependence, opiate withdrawal, vertigo, cerebellar tremor and Parkinson's disease treatment-related psychosis]. In contrast to conventional antiemetics, ondansetron is generally well tolerated with a lower incidence of sedation and only isolated case reports of extrapyramidal reactions. Furthermore, unlike dopamine receptor-blocking neuroleptics, ondansetron does not appear to worsen the symptoms of Parkinson's disease. Thus, in addition to its established indications, preliminary results suggest that ondansetron may be beneficial in a number of novel applications. This drug may represent a treatment alternative in patients with refractory disease, or an effective treatment of conditions for which current therapies are either poorly tolerated or not available. Further investigation of ondansetron in a range of potential new applications appears to be warranted.

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