

Please choose a **Gastrointestinal Medication** and discuss its implications and potential interactions. What would you teach a patient about your chosen drug?

Hello Class,

Ranitidine (Zantac)

Ranitidine is a histamine-2 antagonist that works by reducing the amount of acid produced in the stomach which in turn lowers the concentration of the hydrogen ion. This drug is used in the treatment and prevention of GERD, Zollinger-Ellison syndrome, heartburn, acid indigestion, gastric/ duodenal ulcer, and used in combination with antibiotics to treat H-pylori. Ranitidine is administered in oral, IM, and IV form. Common side effects of Ranitidine are headache, diarrhea, constipation, nausea, vomiting, stomach pain. Other adverse effects might be jaundice, dark urine, bleeding, bruising, slow or increased heart rate, fever, chest pain, and shortness of breath. These effects should be reported to the provider. In older clients, it may cause confusion and other CNS effects, so a lower dose might be prescribed.

Some of the implications of using ranitidine include assessment of hypersensitivity reaction. Ranitidine is contraindicated to the patient with gastric cancer, hepatic impairment, renal impairment, phenylketonuria, porphyria, pregnancy, and breastfeeding. There is potential interaction of many OTC drugs (antacids, aspirin, or NSAIDs), supplements, and herbs with his drug, so the patient should report them to the HCP. Ranitidine should not be taken with other H2 blockers (cimetidine, famotidine, nizatidine). Ranitidine may decrease the absorption of drugs like azole (ketoconazole, itraconazole) that needs an acidic environment for GI absorption and also interacts with drugs like atazanavir, dasatinib, delavirdine (Lilley et al., 2020). Ranitidine and other H2 blockers may interfere with lab tests like urine protein test, test with sulfosalicylic acid causing false-positive results, and a false-negative result in skin test using allergenic extract, so the administration should be avoided 24 hours before the test (Vallerand & Sanoski, 2021, p.654). Potential interaction may cause with theophylline, warfarin, lidocaine, and phenytoin, so precaution should be taken. In addition, smoking decreases the effectiveness of H2- blockers, and alcohol should be avoided to prevent GI bleed and GI irritation.

Patients on H2 blocker therapy should be advised to take the full course of drug therapy and not to double the dose. Encourage patient to stop smoking and alcohol intake, alert patient to avoid driving because of dizziness and drowsiness, and inform to increase fluid and fiber intake.

To add, As of April 2020, FDA has announced the withdrawal of OTC ranitidine drugs (commonly Zantac) from the market and is available as a prescription drug only (FDA, 2020).