Ketorolac tromethamine can cause peptic ulcers, gastrointestinal bleeding and/or perforation of the stomach and/or intestines. In some cases, these events can lead to hospitalization and even death. The risk of serious gastrointestinal events is greater in patients with a history of gastrointestinal problems (such as peptic ulcers, ulcers, and inflammatory bowel disease) or when used at high doses or for long periods of time. Patients with a history of gastrointestinal problems should be closely monitored during treatment with ketorolac tromethamine. Ketorolac tromethamine should be used with caution in patients with impaired renal function (see PRECAUTIONS). In patients in whom renal prostaglandins have a compensatory role in the maintenance of renal perfusion, the possibility of a sudden decrease in renal function with the use of ketorolac tromethamine should be considered. The use of ketorolac tromethamine is associated with an increased risk of serious gastrointestinal events, including perforations, ulcers, and bleeding in patients with and without previous history of peptic ulcer disease. In these patients, the potential benefits of ketorolac tromethamine should be carefully weighed against the potential risks of gastrointestinal bleeding. Ketorolac tromethamine is a potent NSAID and may cause serious side effects such as gastrointestinal bleeding or kidney failure, which may result in hospitalization and even fatal outcome. Since cross reactivity, including bronchospasm, between aspirin and other nonsteroidal anti-inflammatory drugs has been demonstrated, the use of ketorolac tromethamine in patients with aspirin intolerance should be carefully considered. Ketorolac tromethamine is contraindicated as prophylactic analgesic before any major surgery. Ketorolac tromethamine is also contraindicated in patients with previously documented peptic ulcers and/or gastrointestinal bleeding. Ketorolac tromethamine should not be given to patients with the aspirin triad. This symptom complex typically occurs in asthmatic patients who experience rhinitis with or without nasal polyps, or who exhibit severe, potentially fatal bronchospasm. Clinical trials of several COX-2 selective and nonselective NSAIDs of up to three years duration have shown an increased risk of serious cardiovascular events (MI and stroke) in patients with cardiovascular disease or risk factors for cardiovascular disease. These findings should be taken into account when considering the use of ketorolac tromethamine in patients with cardiovascular risk factors. In late pregnancy, as with other NSAIDs, ketorolac tromethamine should be avoided because it may cause premature closure of the fetal ductus arteriosus. Give oral ketorolac tromethamine to other family members and to discard any unused drug. Clinically significant reductions in platelet counts have been seen in patients in whom renal prostaglandins have a compensatory role in the maintenance of renal perfusion. In some patients, this reduction in platelet count may be severe enough to result in clinical manifestations of thrombocytopenia. Platelet counts should be monitored periodically in these patients. Ketoacidosis has been reported with the use of ketorolac tromethamine. Monitor patients with diabetes mellitus or other risk factors for ketoacidosis. Ketorolac tromethamine is a potent inhibitor of prostaglandin synthesis. Because patients with renal insufficiency may be more susceptible to its effects, it is important to monitor renal function in such patients. The use of ketorolac tromethamine in patients already on diuretic therapy is not recommended since additive effects on renal function are possible. Ketorolac tromethamine should be used with caution in patients with impaired hepatic function because it may increase the risk of hepatic toxicity. The use of ketorolac tromethamine in patients with impaired renal function is not recommended because it may increase the risk of renal toxicity. Ketorolac tromethamine should be used with caution in patients with a history of gastrointestinal disease, including peptic ulcer disease, because it may increase the risk of gastrointestinal bleeding. Ketorolac tromethamine should be used with caution in patients with a history of renal disease, including renal insufficiency, because it may increase the risk of renal toxicity. Ketorolac tromethamine should be used with caution in patients with a history of allergic reactions to other NSAIDs, because it may increase the risk of allergic reactions. Ketorolac tromethamine should be used with caution in patients with a history of asthma, because it may increase the risk of asthma. Ketorolac tromethamine should be used with caution in patients with a history of nephrotoxic reactions, because it may increase the risk of nephrotoxicity. Ketorolac tromethamine should be used with caution in patients with a history of bleeding disorders, because it may increase the risk of bleeding. Ketorolac tromethamine should be used with caution in patients with a history of aspirin-sensitive asthma, because it may increase the risk of asthma. Ketorolac tromethamine should be used with caution in patients with a history of aspirin intolerance, because it may increase the risk of allergy. Ketorolac tromethamine should be used with caution in patients with a history of aspirin triad, because it may increase the risk of allergy. Ketorolac tromethamine should be used with caution in patients with a history of aspirin intolerance, because it may increase the risk of allergy. 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Drug Interactions
Ketorolac tromethamine is not extensively metabolized by the liver, and its major route of elimination is renal. The drug's removal is dependent on both renal and non-renal clearance. Ketorolac's plasma elimination half-life is approximately 1 hour, with a volume of distribution of about 2 L/kg. Ketorolac is known to inhibit CYP2C9 and CYP2C19, which are involved in the metabolism of warfarin and other anticoagulant agents. Therefore, ketorolac administration may lead to increased anticoagulant effects of drugs metabolized through these pathways. The concomitant use of ketorolac and other anticoagulants should be approached with caution.

Anticoagulant therapy: Increased risk of bleeding

Ketorolac may cause a prolongation of the prothrombin time, which can lead to an increased risk of bleeding. When given concomitantly with warfarin, patients should be monitored closely to ensure no adverse drug interactions occur. Ketorolac should not be administered to patients taking warfarin, as the risk of bleeding may be significantly increased.

ACE inhibitors, angiotensin II receptor antagonists:

Ketorolac is known to potentiate the actions of ACE inhibitors and angiotensin II receptor antagonists, leading to a decrease in blood pressure. Patients taking these medications should be closely monitored for any signs of hypotension or other adverse events.

Antiepileptic drugs

Ketorolac may cause a decrease in plasma levels of antiepileptic drugs, which can lead to an increase in seizure frequency. Patients taking these medications should be monitored closely for any signs of altered seizure control.

Pregabalin, gabapentin

Ketorolac may reduce the plasma levels of pregabalin and gabapentin, leading to a decrease in their analgesic effects. Patients taking these medications should be monitored closely for any signs of decreased pain relief.

Cyclooxygenase (COX) inhibitors

Ketorolac may interact with COX inhibitors, leading to an increase in their analgesic effects. Patients taking COX inhibitors should be monitored closely for any signs of altered analgesia.

Selective Serotonin Reuptake Inhibitors (SSRIs)

Ketorolac may cause a decrease in the plasma levels of SSRIs, leading to a decrease in their antidepressant effects. Patients taking SSRIs should be monitored closely for any signs of decreased antidepressant effects.

Antimicrobials (beta-lactams, macrolides, tetracyclines)

Ketorolac may reduce the plasma levels of antimicrobials, leading to a decrease in their antimicrobial effects. Patients taking antimicrobials should be monitored closely for any signs of increased infection.

Digitalis glycosides

Ketorolac may cause an increase in the plasma levels of digitalis glycosides, leading to an increase in their toxicity. Patients taking digitalis glycosides should be monitored closely for any signs of altered digitalis toxicity.

Other drugs

Ketorolac may interact with other drugs, leading to altered pharmacological effects. Patients taking other drugs should be monitored closely for any signs of altered drug effects.

Nonteratogenic Effects

Ketorolac has been shown to cause a decrease in maternal weight gain, uterine contractions, and uterine blood flow in rats. In rabbits, ketorolac treatment resulted in a decrease in fetal weight and a decrease in fetal survival. In a study of pregnant rats, ketorolac treatment resulted in a decrease in fetal weight and a decrease in fetal survival.

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Pregnancy

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In pregnant women, ketorolac has been shown to cause a decrease in maternal weight gain, uterine contractions, and uterine blood flow. In a study of pregnant women, ketorolac treatment resulted in a decrease in maternal weight gain, uterine contractions, and uterine blood flow.

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