in patients already at increased risk.

Omalizumab's labeling continues to carry a boxed warning that the drug can produce anaphylaxis, which can occur at any time, from the first dose to after a year or more of repeated dosing. Patients should remain in the office and be observed for an appropriate time after receiving a subcutaneous dose of omalizumab.

Complete prescribing information can be found at www.gene.com/download/pdf/xolair_prescribing.pdf.

NEW TREATMENT FOR OPIOID-INDUCED CONSTIPATION

- The opioid antagonist naloxegol (Movantik) is now approved to treat opioid-induced constipation in adults with chronic noncancer pain.
- The most common adverse effects are abdominal pain, diarrhea, nausea, flatulence, vomiting, and headache.

An opioid antagonist, naloxegol (Movantik), has now been approved to treat opioid-induced constipation in adults with chronic noncancer pain. Naloxegol binds to mu-opiate receptors in the gastrointestinal tract, preventing opioids from attaching to them, which prevents the gastrointestinal slowing and constipation that typically occur with opioid use.

Naloxegol is a PEGylated derivative of naloxone; PEGylation is the process of modifying biologic molecules through covalent attachment of polyethylene glycol (PEG) polymer chains. PEGylation improves drug solubility; decreases immune responses to a drug; increases drug stability; and modifies the pharmacokinetics of the drug to increase the time it stays in the circulation, allowing for less-frequent dosing. PEGylation of naloxegol makes it unlikely to enter the central nervous system and alter the analgesic effect of opioids.

In clinical trials, patients who used naloxegol had significantly more bowel movements per week than patients who received a placebo. Naloxegol hasn't been studied in patients with cancer (hence the restriction on use in such patients).

The most common adverse effects are abdominal pain, diarrhea, nausea, flatulence, vomiting, and headache. Gastrointestinal perforation has been reported in patients receiving other opioid antagonists, so caution should be used in the administration of naloxegol to patients with diminished gastrointestinal-wall integrity. Although an intact blood–brain barrier generally minimizes any systemic effects of naloxegol, opioid withdrawal and loss of pain control have been seen in some patients; patients with an impaired blood–brain barrier and those using methadone for pain control appear to be at greater risk.

Drug interactions are related to naloxegol's metabolism via the cytochrome P-450 (CYP) enzyme system. Strong inhibitors of CYP3A4 (such as ketoconazole, clarithromycin, grapefruit, and grapefruit juice) significantly increase the circulating levels of naloxegol and can induce withdrawal symptoms; their use is contraindicated with naloxegol therapy. Moderate inhibitors of CYP3A4 (such as diltiazem, erythromycin, and verapamil) will increase circulating blood levels of naloxegol as well and should be avoided; if coadministration cannot be avoided, the dosage of naloxegol should be reduced to 12.5 mg daily, and patients should be monitored for adverse effects of naloxegol. When naloxegol is coadministered with strong inducers of CYP3A4 (such as rifampin, St. John's wort, and carbamazepine), concentrations of naloxegol will decrease; coadministration of these agents isn't recommended.

If the patient receives an additional opioid antagonist, there is potential for an additive effect, increasing the risk of opioid withdrawal and a loss of pain control. Such combinations should also be avoided.

In addition to concomitant use of strong CYP3A4 inhibitors, other contraindications to naloxegol are a known or suspected gastrointestinal obstruction (or an increased risk of recurrent obstruction) and a history of serious or severe hypersensitivity reaction to the drug.

Nurses should take a thorough drug and dietary history to confirm that the patient doesn't take other drugs or ingest any foods that will alter circulating levels of naloxegol. Nurses should confirm that patients starting naloxegol understand that they should discontinue any maintenance laxatives they may be taking. If constipation continues after three days of naloxegol therapy, the patient should contact the prescriber; in such cases the drug may be given in addition to other laxatives. Nurses should teach patients to take the drug on an empty stomach at least one hour before the first meal of the day or two hours after (because a high-fat meal will increase the extent and rate of absorption and may increase the drug's effect). The tablets should be swallowed whole; crushing or chewing should be avoided. If opioid therapy is discontinued, the nurse should confirm that naloxegol is also discontinued.

For complete prescribing information, see http://1.usa.gov/1yzGfyR. ▼

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