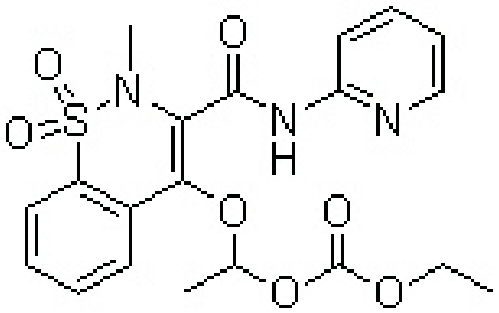
Taj Pharmaceuticals Ltd.
Piroxicam Betacyclodextrine
CAS No. : 96684-40-1

Chemical data

Molecular Formula C20H21N3O7S
Molecular Weight 447.46
CAS Registry Number 96684-40-1



Piroxicam-beta-cyclodextrin is a complex of the established nonsteroida antiinflammatory drug (NSAID) piroxicam and an inert cyclic macromolecule, beta-cyclodextrin. In clinical trials in patients with rheumatic diseases or pain arising from other conditions, it was as effective an analgesic as standard piroxicam, and showed a faster onset of action on the first day of treatment. In short term pharmacodynamic studies in healthy volunteers, piroxicam-beta-cyclodextrin was equivalent to or tended to show less gastrointestinal mucosal toxicity than standard piroxicam, as assessed by endoscopy and faecal blood loss. However, no data are available on its comparative gastrointestinal mucosal effects from long term clinical trials using similar measures. Preliminary findings from a clinical study suggest piroxicam-beta-cyclodextrin caused fewer gastroduodenal lesions than tenoxicam. As with other NSAIDs, the majority of adverse events associated with piroxicam-beta-cyclodextrin in clinical trials were gastrointestinal in origin, with epigastric pain, heartburn and nausea the most common. Thus, piroxicam-beta-cyclodextrin is an effective agent in patients with rheumatic diseases or other pain states. When rapid analgesia is required in the initial treatment of acute pain, the faster onset of action of piroxicam-beta-cyclodextrin may be an advantage over the parent compound; however, this is unlikely to be important during long term therapy. The results of further long term trials are awaited before firm conclusions can be reached regarding the gastrointestinal tolerability of piroxicam-beta-cyclodextrin compared with that of standard piroxicam and other NSAIDs.

DOSAGE

Adult: As piroxicam: 20 mg daily as a single dose.
Elderly: 10 mg daily.
ACUTE MUSCULOSKELETAL CONDITIONS
Adult: As piroxicam: 20 mg daily as a single dose.
Elderly: 10 mg daily.

Carefully consider the potential benefits and risks of Piroxicam Betacyclodextrine and other treatment options before deciding to use Piroxicam Betacyclodextrine. Use the lowest effective dose for the shortest duration consistent with individual patient treatment goalsFor the relief of rheumatoid arthritis and osteoarthritis, the recommended dose is 20 mg given orally once per day. If desired, the daily dose may be divided. Because of the long half-life of Piroxicam Betacyclodextrine, steady-state blood levels are not reached for 7-12 days. Therefore, although the therapeutic effects of Piroxicam Betacyclodextrine are evident early in treatment, there is a progressive increase in response over several weeks and the effect of therapy should not be assessed for two weeks.

SIDE EFFECTS

In patients taking Piroxicam Betacyclodextrine , the most frequently reported adverse experiences occurring in approximately 1-10% of patients are:
Cardiovascular System: Edema.
Digestive System: Anorexia, abdominal pain, constipation, diarrhea, dyspepsia, elevated liver enzymes, flatulence, gross bleeding/perforation, heartburn, nausea, ulcers (gastric/duodenal), vomiting.

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Hemic and Lymphatic System: Anemia, increased bleeding time.
Nervous System: Dizziness, headache.
Skin and Appendages: Pruritus, rash.
Special Senses: Tinnitus.
Urogenital System: Abnormal renal function.
Additional adverse experiences reported occasionally include:
Body As a Whole: Fever, infection, sepsis.
Cardiovascular System: Congestive heart failure, hypertension, tachycardia, syncope.
Digestive System: Dry mouth, esophagitis, gastritis, glossitis, hematemesis, hepatitis, jaundice, melena, rectal bleeding, stomatitis.
Hemic and Lymphatic System: Ecchymosis, eosinophilia, epistaxis, leukopenia, purpura, petechial rash, thrombocytopenia.
Metabolic and Nutritional: Weight changes.
Nervous System: Anxiety, asthenia, confusion, depression, dream abnormalities, drowsiness, insomnia, malaise, nervousness, paresthesia, somnolence, tremors, vertigo.
Respiratory System: Asthma, dyspnea.
Skin and Appendages: Alopecia, bruising, desquamation, erythema, photosensitivity, sweat.
Special Senses: Blurred vision.
Urogenital System: Cystitis, dysuria, hematuria, hyperkalemia, interstitial nephritis, nephrotic syndrome, oliguria/polyuria, proteinuria, renal failure.
Other adverse reactions which occur rarely are:
Body As a Whole: Anaphylactic reactions, appetite changes, death, flu-like syndrome, pain (colic), serum sickness.
Cardiovascular System: Arrhythmia, exacerbation of angina, hypotension, myocardial infarction, palpitations, vasculitis.
Digestive System: Eructation, liver failure, pancreatitis.
Hemic and Lymphatic System: Agranulocytosis, hemolytic anemia, aplastic anemia, lymphadenopathy, pancytopenia.
Hypersensitivity: Positive ANA.
Metabolic and Nutritional: Hyperglycemia, hypoglycemia.
Nervous System: Akathisia, convulsions, coma, hallucinations, meningitis, mood alterations.
Respiratory: Respiratory depression, pneumonia.
Skin and Appendages: Angioedema, toxic epidermal necrosis, erythema multiforme, exfoliative dermatitis, onycholysis, Stevens-Johnson syndrome, urticaria, vesiculobullous reaction.
Special Senses: Conjunctivitis, hearing impairment, swollen eyes.

PRECAUTIONS

Piroxicam Betacyclodextrine cannot be expected to substitute for corticosteroids or to treat corticosteroid insufficiency. Abrupt discontinuation of corticosteroids may lead to disease exacerbation. Patients on prolonged corticosteroid therapy should have their therapy tapered slowly if a decision is made to discontinue corticosteroids.

The pharmacological activity of Piroxicam Betacyclodextrine in reducing fever and inflammation may diminish the utility of these diagnostic signs in detecting complications of presumed noninfectious, painful conditions.

Piroxicam Betacyclodextrine, like other NSAIDs, may cause CV side effects, such as MI or stroke, which may result in hospitalization and even death. Although serious CV events can occur without warning symptoms, patients should be alert for the signs and symptoms of chest pain, shortness of breath, weakness, slurring of speech, and should ask for medical advice when observing any indicative sign or symptoms. Patients should be apprised of the importance of this follow-up (see WARNINGS, Cardiovascular Effects).

Piroxicam Betacyclodextrine, like other NSAIDs, can cause GI discomfort and, rarely, serious GI side effects, such as ulcers and bleeding, which may result in hospitalization and even death. Although serious GI tract ulcerations and bleeding can occur without warning symptoms, patients should be alert for the signs and symptoms of ulcerations and bleeding, and should ask for medical advice when observing any indicative sign or symptoms including epigastric pain, dyspepsia, melena, and hematemesis. Patients should be apprised of the importance of this follow-up

DRUG DESCRIPTION

Piroxicam-beta-cyclodextrin (PBC), a complex of piroxicam with beta-cyclodextrin, was developed with the aim of improving the hydrosolubility and bioavailability of piroxicam. The complex is more rapidly absorbed, with a consequent reduction in the time of contact of piroxicam with the gastric and duodenal mucosa. It is hoped that the shorter contact time might reduce the local toxicity of piroxicam, but it is also possible that transiently higher local concentrations of the drug might worsen the injury to the gastro-duodenal mucosa. Four studies have been conducted in healthy volunteers in order to investigate the effects of PBC on the gastro-intestinal tract. In 3 of these trials, all of similar design, PBC (containing 20 mg of piroxicam) was compared with piroxicam 20mg and placebo given once daily with assessment of faecal blood loss using the 51Cr-labelled red-cell technique, and endoscopic appearance of gastroduodenal mucosa before and after 28 consecutive days of treatment. One study showed a significant difference in respect of faecal blood loss towards the end of the 4-week study period favouring PBC over piroxicam, while the 2 others showed comparable but non-significant trends in favour of PBC. In a fourth study, 32 non-patient volunteers received either piroxicam 20mg once daily; PBC 20mg equivalence; indomethacin 50mg twice daily; or placebo. The treatment was given double blind for 14 days. Endoscopy was performed and gastric potential differences were measured by neutral observers before and at the end of treatment. There were no significant differences in the endoscopic scores between the active treatment groups. The gastric potential difference showed greater changes with indomethacin and piroxicam than with placebo and PBC.

Note /Government Notification: These chemicals are designated as those that are used in the manufacture of the controlled substances and are important to themanufacture of the substances. For any (Control Substance) products Import and Export *** subjected to your country government laws /control substance ACT.

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The Controlled Substances Act (CSA) was enacted into law by the Congress of the United States as Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970.[1] The CSA is the federal U.S. drug policy under which the manufacture, importation, possession, use and distribution of certain substances is regulated. The Act also served as the national implementing legislation for the Single Convention on Narcotic Drugs

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