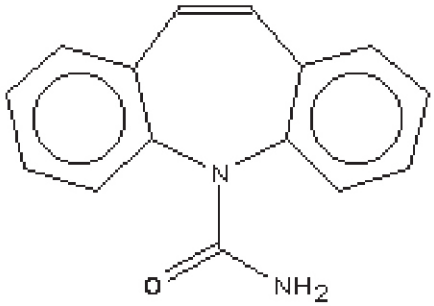
Taj Pharmaceuticals Ltd.

Carbamazepine

CAS No. : 298-46-4

Chemical data



Formula C15H12N2O
Mol. mass 236.269 g/mol

Pharmacokinetic data

Bioavailability 80%
Protein binding 76%
Metabolism Hepatic—by CYP3A4, to active epoxide form (carbamazepine-10,11 epoxide)
Half life 25–65 hours
Excretion 2–3% excreted unchanged in urine

CARBAMAZEPINE: ANTI-EPILEPTIC IN CP/MR

Carbamazepine ("CBZ") is an anticonvulsant and mood stabilizing drug used primarily in the treatment of epilepsy and bipolar disorder. It is also used to treat ADD, ADHD, schizophrenia, Phantom limb syndrome, Paroxysmal extreme pain disorder, and trigeminal neuralgia.

Drug Interactions Involve :

Other Anti-epileptic drugs	Risperidone
Alcohol abuse	Anemia or other blood problems
Behavioral problems	Glaucoma
Heart or blood vessel disease	Urinary obstructive disorders
Diabetes mellitus	Kidney or Liver diseas

DOSAGE

Carbamazepine may be taken with or without food. Carbamazepine is excreted by the kidney and metabolized by the liver and dosages may need to be lowered in patients with liver or kidney dysfunction. Drug blood levels of carbamazepine can be followed.

Carbamazepine comes as a tablet, a chewable tablet, an extended-release (long-acting) tablet, an extended-release capsule, and a suspension (liquid) to take by mouth. The regular tablet, chewable tablet, and liquid are usually taken two to four times a day with meals. The extended-release tablet is usually taken twice a day with meals. The extended -release capsule is usually taken twice a day with or without meals. To help you remember to take carbamazepine, take it at around the same times every day. Follow the directions on your prescription label carefully, and ask your doctor or pharmacist to explain any part you do not understand. Take carbamazepine exactly as directed. Do not take more or less of it or take it more often than prescribed by your doctor.

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Swallow the extended-release tablets whole; do not split, chew, or crush them. The extended-release capsules may be opened and the beads inside sprinkled over food, such as a teaspoon of applesauce or similar food. Do not crush or chew the extended-release capsules or the beads inside them.Shake the liquid well before each use to mix the medication evenly.Your doctor will start you on a low dose of carbamazepine and gradually increase your dose.

It may take a few weeks or longer before you feel the full benefit of carbamazepine. Continue to take carbamazepine even if you feel well. Do not stop taking carbamazepine without talking to your doctor. If you have a seizure disorder and you suddenly stop taking carbamazepine, your seizures may become worse. Your doctor will probably decrease your dose gradually.

SIDE EFFECTS

The following additional adverse reactions have been reported:

Hemopoietic System: Aplastic anemia, agranulocytosis, pancytopenia, bone marrow depression, thrombocytopenia, leukopenia, leukocytosis, eosinophilia, acute intermittent porphyria.
Skin: Toxic epidermal necrolysis (TEN) and Stevens-Johnson syndrome (SJS) (see BOXED WARNING), pruritic and erythematous rashes, urticaria, photosensitivity reactions, alterations in skin pigmentation, exfoliative dermatitis, erythema multiforme and nodosum, purpura, aggravation of disseminated lupus erythematosus, alopecia, and diaphoresis. In certain cases, discontinuation of therapy may be necessary. Isolated cases of hirsutism have been reported, but a causal relationship is not clear.
Cardiovascular System: Congestive heart failure, edema, aggravation of hypertension, hypotension, syncope and collapse, aggravation of coronary artery disease, arrhythmias and AV block, thrombophlebitis, thromboembolism, and adenopathy or lymphadenopathy.

Some of these cardiovascular complications have resulted in fatalities. Myocardial infarction has been associated with other tricyclic compounds.
Liver: Abnormalities in liver function tests, cholestatic and hepatocellular jaundice, hepatitis; very rare cases of hepatic failure.
Pancreatic: Pancreatitis.
Respiratory System: Pulmonary hypersensitivity characterized by fever, dyspnea, pneumonitis, or pneumonia.
Genitourinary System: Urinary frequency, acute urinary retention, oliguria with elevated blood pressure, azotemia, renal failure, and impotence. Albuminuria, glycosuria, elevated BUN, and microscopic deposits in the urine have also been reported.
Testicular atrophy occurred in rats receiving Tegretol orally from 4-52 weeks at dosage levels of 50-400 mg/kg/day. Additionally, rats receiving Tegretol in the diet for 2 years at dosage levels of 25, 75, and 250 mg/kg/day had a dose-related incidence of testicular atrophy and aspermatogenesis. In dogs, it produced a brownish discoloration, presumably a metabolite, in the urinary bladder at dosage levels of 50 mg/kg and higher. Relevance of these findings to humans is unknown.
Nervous System: Dizziness, drowsiness, disturbances of coordination, confusion, headache, fatigue, blurred vision, visual hallucinations, transient diplopia, oculomotor disturbances, nystagmus, speech disturbances, abnormal involuntary movements, peripheral neuritis and paresthesias, depression with agitation, talkativeness, tinnitus, and hyperacusis.

There have been reports of associated paralysis and other symptoms of cerebral arterial insufficiency, but the exact relationship of these reactions to the drug has not been established.Isolated cases of neuroleptic malignant syndrome have been reported with concomitant use of psychotropic drugs.

Digestive System: Nausea, vomiting, gastric distress and abdominal pain, diarrhea, constipation, anorexia, and dryness of the mouth and pharynx, including glossitis and stomatitis.

Eyes: Scattered punctate cortical lens opacities, as well as conjunctivitis, have been reported. Although a direct causal relationship has not been established, many phenothiazines and related drugs have been shown to cause eye changes.

Musculoskeletal System: Aching joints and muscles, and leg cramps.

DRUG DESCRIPTION

Carbamazepine (5H-dibenzazepine-5-carboxamide) is an iminostilbene derivative with a tricyclic structure. It is an antiepileptic drug widely used for treatment of simple and complex partial seizures, trigeminal neuralgia, and bipolar affective disorder.

Carbamazepine selectively inhibits high frequency epileptic foci while normal neuronal activity remains undisturbed. Carbamazepine is absorbed erratically after oral administration because of its lipophilic nature. It has a large volume of distribution; peak plasma levels occur 4-8 hours postingestion but may take up to 24 hours to peak. The primary site of metabolism is the liver; its metabolite also is active, which may increase duration of the symptoms of toxicity. Carbamazepine is an anti-seizure medication. Recurrent seizures (epilepsy) are divided into two main categories according to how much of the brain is involved, partial and generalized epilepsy (which includes petit mal, grand mal, and myoclonic epilepsy). Seizures are called "simple" if there is no loss of consciousness and "complex" if there is. Medicines that inhibit seizures are called anti-convulsants. Carbamazepine works as an anti-convulsant for partial and grand mal seizures by reducing or blocking certain responses in the brain. It is also used for treating trigeminal neuralgia. One dosage form, Equetro, has been approved for treating bipolar disorder.

This document plus the full buyer/ prescribing information, prepared for health professionals can be found at:
http://www.tajapi.com
or by contacting the sponsor, Taj Pharmaceuticals Limited., at:
91 022 30601000.
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Taj Pharmaceuticals Limited,
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