Erlova®

Generic name:

Erlotinib

Category:

Antineoplastic

Mechanism of action:

Erlotinib inhibits the intracellular phosphorylation of tyrosine kinase associated with the epidermal growth factor receptor (EGFR) which is expressed on the surface of normal cells and cancer cells.

Pharmacokinetics:

Erlotinib is approximately 60% absorbed after oral administration and peak plasma levels occur 4 hours after dosing. Following absorption, erlotinib is approximately 93% protein-bound to albumin and alpha-1 acid glycoprotein. Erlotinib is metabolized primarily by CYP3A4 and to a lesser extent by CYP1A2 and the extrahepatic isoform CYP1A1. The half-life is approximately 36 hours. Time to reach steady-state plasma concentration would, therefore, be 7 to 8 days.

Indications:

- **Non-small cell lung cancer:** For the treatment of patients with locally advanced or metastatic non-small cell lung cancer after failure of at least 1 prior chemotherapy regimen.
- **Pancreatic cancer:** For the first-line treatment of patients with locally advanced, unresectable, or metastatic pancreatic cancer in combination with gemcitabine.

Dosage and Administration:

- **Non-small cell lung cancer:** 150 mg taken at least 1 hour before or 2 hours after the ingestion of food.
- **Pancreatic cancer:** 100 mg in combination with gemcitabine at least 1 hour before or 2 hours after the ingestion of food.
- **Duration of therapy:** Continue treatment until disease progression or unacceptable toxicity occurs. There is no evidence that treatment beyond progression is beneficial.
- The safety and efficacy of erlotinib in children have not been studied.

Contraindications:

None known.

Precautions:

- **Pulmonary effects:** There have been infrequent reports of serious ILD[1]-like events, including fatalities, in patients receiving erlotinib for treatment of non-small cell lung cancer, pancreatic cancer or other advanced solid tumors. In the event of acute onset of new or progressive, unexplained pulmonary symptoms, such as dyspnea, cough and fever, interrupt erlotinib therapy pending diagnostic evaluation. If ILD is diagnosed, discontinue erlotinib and institute appropriate treatment as necessary.

- **Hepatotoxicity:** Cases of hepatic failure and hepatorenal syndrome (including fatalities) have been reported during use of erlotinib, particularly in patients with baseline hepatic function impairment. Interrupt or discontinue erlotinib dosing if total bilirubin is more than 3 times ULN and/or transaminases are more than 5 times ULN in the setting of normal pretreatment values.

- **Renal effects:** Cases of hepatorenal syndrome**,** acute renal failure (including fatalities) and renal insufficiency have been reported. Periodically monitor renal function and serum electrolytes in patients at risk of dehydration.

Pregnancy:

FDA pregnancy category D.

Lactation:

It is not known whether erlotinib is excreted into human milk. Because many drugs are excreted in human milk, and because the effects of erlotinib on infants have not been studied, advise women against breast-feeding while receiving erlotinib therapy.

Drug interactions:

- CYP3A4 inducers (eg, carbamazepine, phenobarbital, phenytoin, rifampin, St. John's wort)**:** The plasma concentration of erlotinib is decreased because of an increase in its metabolism. Consider a dose increase of erlotinib if coadministered with a potent CYP3A4 inducer. If the erlotinib dose is adjusted upward, the dose should be reduced immediately to the indicated starting dose when the CYP3A4 inducer is discontinued. Avoid coadministration.

- CYP3A4 inhibitors (eg, atazanavir, clarithromycin, grapefruit or grapefruit juice, indinavir, itraconazole, ketoconazole, nefazodone, nelfinavir, ritonavir, saquinavir, telithromycin, troleandomycin, voriconazole): Erlotinib plasma concentrations may be elevated, increasing the risk of adverse reactions and necessitating dosage reduction. Use with caution.

- Drugs that alter upper GI tract pH (eg, antacids, H_2 receptor antagonists [eg, ranitidine], proton pump inhibitors [eg, omeprazole]): drugs that alter the pH of the upper GI tract may alter the solubility of erlotinib and reduce its bioavailability. Omeprazole decreased erlotinib AUC by 46% (Avoid coadministration if possible). Also, separate the dose of antacids and erlotinib by several hours.

[1] Interstitial lung disease

- Warfarin: INR elevations and infrequent reports of bleeding, including GI and non-GI bleeding, have been reported during warfarin coadministration. Monitor for changes in prothrombin time or INR.

- Drug/Food interaction: grapefruit or grapefruit juice may increase erlotinib AUC. Coadminister with caution. Erlotinib's bioavailability is substantially increased by food to almost 100%. Take erlotinib at least 1 hour before or 2 hours after food.

Adverse reactions:

Erlotinib adverse reactions in patients with non-small cell lung cancer (≥10): Fatigue, rash, diarrhea, anorexia, nausea, vomiting, pruritus, dry skin, conjunctivitis, keratoconjunctivitis, stomatitis, abdominal pain, dyspnea, cough, Infection.

Packaging:

Erlova® is available as 150 mg F.C tablets in box of 30 tablets.