DESCRIPTION

DICLOFENAC POTASSIUM

Diclofenac Potassium is a non-steroidal anti-inflammatory drug (NSAID) used to reduce mild to moderate pain and inflammation. The exact mechanism of action is not entirely known, but it is thought to be inhibited prostaglandin synthesis by inhibiting cyclooxygenase (COX) thereby possesses the anti-inflammatory, antipyretic, and analgesic action. Diclofenac also appears to possess bacteriostatic property by inhibiting bacterial DNA synthesis. Diclofenac inhibits COX-2 rather than COX-1 so, it is more safer NSAID compared to other NSAIDs.

CHEMISTRY:

CHEMICAL FORMULA- \( C_{14}H_{10}Cl_{2}KNO_2 \)

CHEMICAL STRUCTURE-

![Chemical Structure of Diclofenac Potassium]

MOLECULAR WEIGHT- 334.23 g./mol.

PHARMACOLOGY

ABSORPTION

Diclofenac Potassium is almost 100% absorbed after oral administration compared to IV administration as measured by urine recovery. However, due to first-pass metabolism, only about 50% of the absorbed drug is available systemic circulation.

DISTRIBUTION
Diclofenac Potassium has 99% protein binding so it is distributed throughout the body fluids.

**Metabolism**

Diclofenac Potassium is metabolized in liver.

**Excretion**

Diclofenac Potassium is excreted through both urine and bile.

**Half-life** ($t_{1/2}$)

The plasma half-life of Diclofenac Potassium is nearly 2 hours.

**Max**

A peak plasma level of Diclofenac Potassium is achieved approximately within 1 hour.

**Description**

**Serratiopeptidase**

Serratiopeptidase is a centrally acting agent for painful musculoskeletal conditions. The drug inhibits inflammatory edema due to phlogogenic (causing inflammation) substances such as carragenin, dextran, serotonin and bradykinin. It deactivates plasmin inhibitors, hydrolyses pain mediators like bradykinin, histamine, etc, accelerates liquefaction & elimination of sputum, pus & haematoma, reduces inflammation and improves microcirculation. It helps the body to breakdown pus & debris of dead microbes & thus increases penetration of antibiotics at the site of infection.

**Pharmacology**

**Absorption**

After oral administration, Serratiopeptidase is almost totally absorbed from G.I. tract.

**Distribution**

Serratiopeptidase binds to alpha-2 macroglobulin in the blood and produce an enzyme activity in the blood circulation. It shows a steep rise in concentration at the site of injury and inflammation.

**Metabolism**

Metabolism of Serratiopeptidase takes place in liver.

**Excretion**

The metabolites of Serratiopeptidase are excreted through urine and faeces.

**Indications of Tab. Brodase-D**

Tab. Brodase-D is indicated in painful conditions like post operative oedema, inflammation and oedema associated with trauma, infection with inflammation, renal colic, acute gout. Tab. Brodase-D also indicated in musculoskeletal and joint disorders such as peri articular disorders like bursitis and tendonitis, rheumatoid arthritis, osteoarthritis and ankylosing spondylitis, soft tissue disorders such as sprains, strains and fracture pain.

**Dosage**
TAB. BRODASE-D can be taken one tablet twice daily or thrice daily after meal.

ADVERSE EFFECTS
Some time TAB. BRODASE-D may manifest rare and negligible adverse effects like abdominal pain, constipation, diarrhea, dyspepsia, flatulence, heartburn, nausea, gastrointestinal ulcers and vomiting.

DRUG INTERACTIONS
With ACE Inhibitors-
Studies suggest that the action of anti hypertensive drug (ACE inhibitors) may be reduced by Diclofenac potassium.

With Aspirin-
Proteins binding of Diclofenac potassium will be reduced if it is taken with Aspirin. Concomitant administration of Diclofenac and aspirin is not recommended.

With Warfarin-
Use of Warferin and Diclofenac potassium at a time is contraindicated as both the drug act synergistically in GI bleeding. It may lead to serious GI bleeding.

CONTRAINDICATIONS
- Hypersensitivity against Diclofenac.
- Active stomach or duodenal ulceration or gastrointestinal bleeding.
- Third-trimester pregnancy.
- Severe insufficiency of the heart.
- Severe liver insufficiency.
- Severe renal insufficiency.
- Caution in patients with severe, active bleeding such as cerebral hemorrhage.

PRECAUTIONS
Patient with past story of experienced stomach discomfort or heartburn after taking NSAIDs must take care before TAB. BRODASE-D therapy starts.
Care must be taken to the patients suffering from asthma, heart disease, liver disease, kidney disease, high blood pressure, a bleeding disorder or other blood disorders, including hepatic porphyria.

OVERDOSAGE
If accidentally TAB. BRODASE-D taken more than recommended dose then medical advice intervention is required.