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For the use only of a Registered Medical Practitioner or a Hospital or a Laboratory

DILZEM GEL

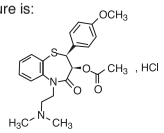
(Diltiazem Hydrochloride Gel 2%)

COMPOSITION :

Diltiazem Hydrochloride I.P. 2 % w/w
Gel Base q.s.

DESCRIPTION

Diltiazem hydrochloride is a calcium ion cellular influx inhibitor (slow channel blocker). Diltiazem Hydrochloride is A white, crystalline powder or small crystals, it is freely soluble in chloroform, in methanol, in water and in formic acid; sparingly soluble in ethanol; practically insoluble in ether. Chemically, Diltiazem Hydrochloride is (2S,3S)-2, 3,4,5-tetrahydro-5-(2-diniethylaminoethyl)-2-(4-methoxyphenyl)- 4-oxobenzo[b]thiazepin-3-yl acetate hydrochloride. Molecular formula of Diltiazem Hydrochloride is $C_{22}H_{26}N_2O_4S$,HCl and molecular weight is 451.0. The chemical structure is:



DOSAGE FORM

Gel for topical use.

PHARMACODYNAMIC PROPERTIES

Pharmacodynamic properties

Diltiazem hydrochloride is a calcium antagonist. It selectively reduces calcium entry through voltage-dependent calcium channels into vascular smooth muscle cells and myocardial cells. This lowers the concentration of intracellular calcium which is available to active contractile proteins.

Mechanism of action

Anal fissure is a linear ulcer in the squamous epithelium of the anal canal located just distal to the dentate line. It is usually located in the posterior midline but occurs anteriorly in a fifth or more or patients. It typically causes pain during defecation which may last for 1-2 h afterwards. The most consistent finding on physical examination is spasm of the anal canal due to hypertonia of the internal anal sphincter. It has been postulated that this may either be due to or be the result of ischaemia. All management options aim to reduce anal tone. Calcium channel blockers, such as diltiazem improve fissure healing by inhibiting calcium ion entry through voltage-sensitive areas of vascular smooth muscle causing anal sphincter muscle relaxation and vascular dilatation, thereby reducuing the anal pressure and increasing the blood flow to the area to allow healing to occur.

INDICATIONS

Topical treatment of anal fissures.

DOSE AND METHOD OF ADMINISTRATION

1.5 - 2 cm strip (measured with the help of the enclosed measuring strip) of the gel is to be applied three times daily (Including bed time application) and after each defecation. The duration of treatment will, in principle, 2 months. Close the tube tightly, immediately after each use.

CONTRAINDICATIONS

It is contraindicated in in patients with:

- Second- or third-degree AV block except in the presence of a functioning ventricular pacemaker.
- Severe bradycardia (below 40 bpm)
- Left ventricular failure with pulmonary congestion
- Hypersensitivity to diltiazem or to any of the excipients

WARNINGS AND PRECAUTIONS

Close observation and caution is necessary in patients with reduced left ventricular function, bradycardia (risk of exacerbation) or with first degree AV block detected on the electrocardiogram (risk of exacerbation and rarely, of complete block).

Prior to general anaesthesia, the anaesthesist must be informed of ongoing diltiazem treatment. Depression of cardiac contractility, conductivity and automaticity, as well as the vascular dilatation associated with anaesthetics may be potentiated by calcium channel blockers. Calcium channel blocking agents, such as diltiazem, may be associated with mood changes, including depression.

Like other calcium channel antagonists, diltiazem has an inhibitory effect on intestinal motility. Therefore it should be used with caution in patients at risk to develop an intestinal obstruction.

On the basis of reported adverse drug reactions, i.e. dizziness, hypotension, the ability to drive and use machines could be altered.

Pregnancy and lactation

There is very limited data from the use of diltiazem in pregnant patients. Diltiazem has been shown to have reproductive toxicity (teratogenic) in some animal species (rat, mice, rabbit). In the absence of adequate evidence of safety in human pregnancy, dilitiazem is therefore not recommended during pregnancy as well as in women of child-bearing potential not using effective contraception.

Nursing mothers

Diltiazem hydrochloride is excreted in breast milk at low concentrations. One report suggests that concentrations in breast milk reach similar levels to those in serum. Breast-feeding while taking this drug should be avoided. If use of diltiazem is considered medically essential, an alternative method of infant feeding should be instituted.

UNDESIRABLE EFFECTS

The classic adverse reactions to diltiazem, were headache (8.6%) and hypotension (1.4%). Other various noted side effects were: an allergic reaction (4.3%), irritation (14.3%), dizziness (2.9%), facial flushing (1.4%), and local heat (1.4%).

OVERDOSAGE

Headache, fainting or dizziness one the most common indications of over dosage. When these symptoms are observed, treatment should cease a minimum of 8 hours and then the dosage halved. Simple analgesics such as paracetamol may be helpful for headaches. If headaches are severe and persistent, cease administration.

EXPIRY DATE

Do not use later than the date of expiry.

STORAGE

Store at a temperature not exceeding 25^{o}C.
Do not freeze.

PRESENTATION

Dilzem gel is available in tube pack of 30g

torrent

Manufactured by :
TORRENT PHARMACEUTICALS LTD.
Indrad-382 721, Dist. Mehsana, INDIA.

At : Nr. Sabar Dairy, Talod Road, Po. Hajipur,
Tal.: Himatnagar-383 006, Gujarat, India.