Kofarest®

7.5mg Ambroxol/ml Drops

1. **Generic Name**

Ambroxol HCl

2. **Qualitative and Quantitative composition**

Ambroxol HCl. ..... 7.5 mg

3. **Dosage form and strength**

Oral drops containing 7.5 mg Ambroxol HCl

4. **Clinical particulars**

4.1 Therapeutic indication

Kofarest drops is indicated to liquefies the mucous.

4.2 Posology and method of administration

Recommended dose for Kofarest drops:

< 6 months: 0.5 ml B.I.D

7 – 12 months: 1 ml B.I.D

13 – 24 months: 2 ml 2-3 times a day

4.3 Contraindication

Kofarest drops is contraindicated in patients with hypersensitivity to any ingredient of the formulation.

4.4 Special warnings and precautions for use

- While treating cough as a symptom, it is important to make every effort to determine and treat appropriately the underlying cause, such as a specific infection.

- Caution should be observed while prescribing Kofarest drops to children.
- Since mucolytics, such as Ambroxol, may disrupt the gastric mucosal barrier, Kofarest drops should be used with care in patients with a history of peptic ulceration.

4.5 Drug interactions

NA.

4.6 Use in special population

- Pediatric: Safe in children.
- Geriatric: Clinical studies of did not include sufficient numbers of subjects aged 65 years and older to determine whether they respond differently from younger subjects. If clinically warranted due to insufficient bronchodilator response, the dose of may be increased in elderly patients as tolerated, in conjunction with frequent clinical and laboratory monitoring, to the maximum recommended daily dose.
- Liver impairment: Use with caution.
- Renal failure: Use with caution.
- Pregnancy and lactation: Safety of Kofarest drops has not been studied in pregnancy and lactation. Therefore, probable benefits should be weighed against possible risks, before prescribing.

4.7 Effects on ability to drive and use machine

Patients should be cautioned against engaging in activities requiring complete mental alertness, and motor coordination such as operating machinery until their response to Kofarest drops is known.

4.8 Undesirable effects

An adverse drug reaction includes Thrombocytopenia, Eosinophilia, Palpitations, Cardiac flutter, Vascular malformation, Vertigo, Tinnitus, Eyelid edema, Nausea, Vomiting, Diarrhoea, Chest pain, Chills, Hepatic function abnormal, Anaphylactic shock, Pneumonia, Conjunctivitis, Infusion related reaction, Blood pressure increased, Decreased appetite, Pain in extremity, Dizziness, Headache, Tremor, Insomnia, Dysuria, Genital erosion, Dyspnea, Rash, Pruritus, Flushing.

4.9 Overdose

There is limited experience of overdose with Kofarest drops. Initiate general symptomatic and supportive measures in all cases of overdosages where necessary.

5. Pharmacological properties

5.1 Mechanism of action

The main mechanism of action for Ambroxol involves stimulation of surfactant synthesis, a complex mechanism that is not yet fully understood, but that gives Ambroxol effective mucokinetic and secretagogue properties, thus promoting mucous clearance, facilitating expectoration and easing productive cough. In addition to the mucokinetic and secretagogue properties, Ambroxol is also known to have numerous widespread pharmacodynamic properties

5.2 Pharmacodynamic properties

Ambroxol is a mucolytic agent. Excessive Nitric oxide (NO) is associated with inflammatory and some other disturbances of airways function. NO enhances the activation of soluble guanylate cyclase and cGMP accumulation. Ambroxol has been shown to inhibit the NO-dependent activation of soluble guanylate cyclase. It is also possible that the inhibition of NO-dependent activation of soluble guanylate cyclase can suppress the excessive mucus secretion; therefore it lowers the phlegm viscosity and improves the mucociliary transport of bronchial secretions.

5.3 Pharmacokinetic properties

Ambroxol has a bioavailability of 79% when administered orally. It is metabolized in the liver by cytochrome P450 3A4 and has a terminal elimination half-life of approximately 10 h, with a total clearance of 660 ml/min. On distribution from blood to tissue, the highest concentration of Ambroxol is found in the lungs; in human lung tissue, Ambroxol has been detected at concentrations 15- to 20-fold higher than those in the blood. Furthermore, age and gender have not been shown to affect the pharmacokinetics of Ambroxol to a clinically relevant extent, therefore dose adjustment is not indicated.

6. Nonclinical properties

6.1 Animal Toxicology or Pharmacology

NA.

7. Description

Ambroxol belongs to a group of medications called mucolytics. Its chemical name is (1r,4r)-4-{[(2-amino-3,5-dibromophenyl)methyl]amino}cyclohexan-1-ol hydrochloride and its structure is:

Its empirical formula is $C_{13}H_{19}Br_2ClN_2O$ and its molecular weight is 414.56 g/mol.

8. Pharmaceutical particulars

8.1 Incompatibilities

There are no known incompatibilities.

8.2 Shelf-life

24 months.

8.3 Packaging Information

Kofarest drops is available in bottle of 15ml.

8.4 Storage and handling instructions

Store below 25^{o}C. Protect from light.

9. Patient Counselling Information

9.1 Adverse Reactions

Refer part 4.8

9.2 Drug Interactions

Refer part 4.5

9.3 Dosage

Refer part 4.2

9.4 Storage

Refer part 8.4

9.5 Risk Factors

Refer part 4.4

9.6 Self-monitoring information

NA

9.7 Information on when to contact a health care provider or seek emergency help

Patient is advised to be alert for the emergence or worsening of the adverse reactions and contact the prescribing physician.

9.8 Contraindications

Refer part 4.3

10. Manufactured by CENTAUR PHARMACEUTICALS PVT. LTD. ,Lab Daffodil and Goa Antibiotics

11. Details of permission or license number with date

158(272)/MFG/DFDA/2011/4570 dated. 15.11.2011 for export.

158(272)/MFG/DFDA/2010/15858 dated. 05.02.2010 for domestic.

12. Date of revision: January 2022.