**PROFESSIONAL INFORMATION**

**SCHEDULING STATUS**

**S0**

**1 NAME OF MEDICINE**

NORFLEX GEL, benzydamine hydrochloride 3,0 g per 100 g gel.

**2 QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each 100 g contains: Benzydamine hydrochloride 3.0 g.

Other ingredients include glycerol, hydroxyethyl cellulose, and isopropyl alcohol, lavender perfume and purified water.

For full list of excipients, see section 6.1.

**3 PHARMACEUTICAL FORM**

Clear colourless to slightly opalescent gel with an odour of lavender/isopropyl alcohol.

**4 CLINICAL PARTICULARS**

**4.1 Therapeutic indications**

NORFLEX GEL is recommended as a short-term treatment for the symptomatic relief of painful inflammatory conditions of the musculoskeletal system, including:

Acute inflammatory conditions such as myalgia and bursitis.

Traumatic conditions such as sprains, strains, contusions and the after-effects of fractures.

**4.2 Posology and method of administration**

NORFLEX GEL should be massaged lightly into the area three times daily, up to six times daily in more severe conditions (at the discretion of your doctor). 35 to 85 mm (1 to 2.5 g) should be used for each application.

Do not use continuously for longer than 10 days without consulting your doctor.

**4.3 Contraindications**

Hypersensitivity to benzydamine hydrochloride or any of the excipients (See 6.1).

Safety in pregnancy and lactation has not been established.

**4.4 Special warnings and precautions for use**

Avoid contact with eyes and mucosal surfaces.

Benzydamine use is not advisable in patients with hypersensitivity to acetylsalicylic acid or other non-steroidal anti-inflammatory drugs (NSAIDs).

Bronchospasm may be precipitated in patients suffering from or with a previously history of bronchial asthma. Caution should be exercised in these patients.

**4.5 Interaction with other medicines and other forms of interaction**

None known.

**4.6 Fertility, pregnancy and lactation**

Safety has not been established.

**4.7 Effects on ability to drive and use machines**

None known.

**4.8 Undesirable effects**

*Immune system disorders*

Frequency not known: Anaphylactic reaction which can be potentially life-threatening.

*Skin and subcutaneous tissue disorders*

Frequency unknown: Photosensitivity reactions have been reported.

Local skin reactions ranging from erythema to papular eruptions. The skin may return to normal on stopping treatment.

**Reporting of suspected adverse reactions**

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Health care providers are asked to report any suspected adverse reactions to SAHPRA via the “6.04 Adverse Drug Reactions Reporting Form”, found online under SAHPRA’s publications: https://www.sahpra.org.za/Publications/Index/8. Alternately you can contact iNova Pharmaceuticals on +27 (0) 11 087 0000. Website: www.inovapharma.co.za.

**4.9 Overdose**

See Sections 4.4 and 4.8.

On accidental ingestion, the following symptoms may appear: Tissue numbness, a stinging or burning sensation, light-headedness, nausea, vomiting and an altered sense of taste.

Treatment is symptomatic and supportive.

**5 PHARMACOLOGICAL PROPERTIES**

**5.1 Pharmacodynamic properties**

A. 3.1 Antirheumatics (anti-inflammatory) agents

Benzydamine hydrochloride is a non-steroidal, anti-inflammatory agent and exerts a local anti-inflammatory, and analgesic action.

**Mechanism of action**

The indazole analogue benzydamine has physicochemical properties and pharmacological activities which differ from those of the aspirin-like NSAIDs.

Unlike aspirin-like NSAIDs which are acids or metabolized to acids, benzydamine is a weak base.

In further contrast, benzydamine is a weak inhibitor of the prostaglandin synthesis. Only at concentration of 1mM and above benzydamine effectively inhibits cyclooxygenase and lipoxygenase enzyme activity.

Benzydamine mostly exerts its effects through inhibition of the synthesis of pro-inflammatory cytokines including tumour necrosis factor-alpha (TNF-α) and Interleukin-1β (IL-1β) without significantly affecting other pro-inflammatory (IL-6 and 8) or anti-inflammatory cytokines (IL-10, IL-1 receptor antagonist).

Further mechanisms of action are hypothesised including the inhibition of the oxidative burst of neutrophils as well as membrane stabilisation as demonstrated by the inhibition of granule release from neutrophils and the stabilization of lysosomes.

The local anaesthetic activity of the compound has been related to an interaction with cationic channels.

**Pharmacodynamic effects**

Benzydamine specifically acts on the local mechanisms of inflammation such as pain, oedema or granuloma.

Benzydamine topically applied demonstrates anti-inflammatory activity reducing oedema as well as exudate, and granuloma formation.

Further, it exhibits analgesic properties if pain is caused by an inflammatory condition and local anaesthetic activity.

Hyperthermia, which is indicative of systemic functional involvement, is poorly affected by benzydamine.

**5.2 Pharmacokinetic properties**

NORFLEX GEL is well absorbed through the skin.

Following topical administration, benzydamine is absorbed through intact skin and reaches peak levels between 24 - 32 hours, amounting to about 20 – 25 % of the plasma levels obtained after the oral administration of the same dose.

About half of benzydamine is excreted unchanged via the kidneys at a rate of 10 % of the dose within the first 24 hours.

The remainder is metabolised, mostly to N-oxide.

**6 PHARMACEUTICAL PARTICULARS**

**6.1 List of excipients**

- Glycerol
- hydroxyethyl cellulose
- isopropyl alcohol
- lavender perfume
- purified water.

**6.2 Incompatibilities**

None known.

**6.3 Shelf life**

24 months.

**6.4 Special precautions for storage**

Store below 30 °C

Protect from light.

KEEP OUT OF REACH OF CHILDREN

**6.5 Nature and contents of container**

White aluminium laminated tubes containing 30 g or 75 g.

**6.6 Special precautions for disposal**

No special precautions.

**7 HOLDER OF CERTIFICATE OF REGISTRATION**

iNova Pharmaceuticals (Pty) Ltd

15E Riley Road

Bedfordview

2007

**8 REGISTRATION NUMBER**

32/3.1/0547

**9 DATE OF FIRST AUTHORISATION**

26/09/2001

**10 DATE OF REVISION OF THE TEXT**

20 November 2020.