1.3.1.1. PROFESSIONAL INFORMATION FOR MEDICINES FOR HUMAN USE

SCHEDULING STATUS

S1

1. NAME OF THE MEDICINE

XYLOCAINE 10 mg/0,1 ml Pump Spray

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each metered dose (0,1 ml) of XYLOCAINE 10 mg/0,1 ml contains 10 mg of lidocaine

Contains alcohol: Ethanol 23,136 % *m/v*

Contains sweetener: Saccharin 0,15 mg

Sugar free

For full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Pump Spray

XYLOCAINE 10 mg/0,1 ml is a clear or almost clear, slightly coloured liquid (pale pink or pale yellow) with an odour of banana, ethanol and levomenthol packed in a glass bottle with a dose valve.

4. CLINICAL PARTICULARS

4.1. Therapeutic indications

XYLOCAINE 10 mg/0,1 ml is indicated in adults for:

- Use on mucous membranes to provide surface anaesthesia, which lasts for approximately 10 to 15 minutes. The anaesthesia usually occurs within 1 to 3 minutes, depending on the area of application. It can be used on accessible

mucous membranes prior to examination, endoscopy or instrumentation, surgical or other procedures.

- **Otorhinolaryngology:** To prepare for puncture of the maxillary sinus, analgesia of the tympanic membrane and pharynx and to prevent gagging when inserting instruments.
- **Obstetrics:** As a mucosal surface analgesic in normal deliveries, low forceps or vacuum extractions. Postoperatively to relieve pain during suturing and episiotomy.
- **Dentistry:** As a local anaesthetic prior to injections, incisions of minor abscesses, deep scaling and before taking intra-oral impressions.
- **General anaesthesia:** XYLOCAINE 10 mg/0,1 ml may be employed to prevent a patient coughing with an endotracheal tube *in situ* during surgical anaesthesia.

4.2. Posology and method of administration

Posology

Reactions and complications are best averted by employing the minimal effective dosage.

The following dosage recommendations should be regarded as a guide. The clinician's experience and knowledge of the patient's physical status are of importance in calculating the required dose.

Each activation of the metered dose valve delivers 10 mg XYLOCAINE 10 mg/0,1 ml. It is unnecessary to dry the site prior to application.

Adults

Table 1: Dose recommendations

Area	Recommended dose (mg)
Nasal procedures, e.g. puncture of the maxillary sinus	20 to 60
Oral and dental procedures, e.g. prior to injection	20 to 200
Procedures in the oropharynx, e.g. gastrointestinal endoscopy	20 to 200
Procedures in the respiratory tract, e.g. insertion of instruments and tubes	50 to 400
Procedures in the larynx, trachea and bronchi	50 to 200
Procedures in obstetrics and gynaecology, e.g. vaginal delivery, suturing of ruptures in the mucosa and cervical biopsies	50 to 200

Dose

Dosage recommendations in the table should be regarded as guidelines for use in the average adult (70 kg). Individual variations occur. In adults with a high body weight a gradual reduction in the dosage is often necessary and should be based on the ideal body weight. It is recommended that the maximum dose used should not exceed 5 to 7 mg/kg per procedure.

Since absorption is variable and especially high in the trachea and bronchi (see section 4.4 and section 5.2) the maximum recommended doses vary depending on the area of application, as indicated in **Table 1** above.

Paediatric population

Children over 12 years of age weighing less than 25 kg should be given doses commensurate with their weight and physiological condition.

In children between 3 to 12 years of age, doses should not exceed 3 mg/kg for laryngotracheal use and 4 to 5 mg/kg for nasal, oral and oropharyngeal use.

XYLOCAINE 10 mg/0,1 ml is not for use in neonates (aged 3 months or less) and

infants (less than 1 year of age).

The number of sprays depends on the area to be anaesthetised.

XYLOCAINE 10 mg/0,1 ml should not be used on cuffs of endotracheal tubes (ETT) made of plastic (polypropylene) (see section 4.4.).

Method of administration

XYLOCAINE 10 mg/0,1 ml is administered using the supplied nozzle.

4.3. Contraindications

XYLOCAINE 10 mg/0,1 ml is contraindicated in:

- Patients with hypersensitivity to lidocaine or other amide-type local anaesthetics or to any of the excipients in XYLOCAINE 10 mg/0,1 ml (see section 6.1).
- Neonates and infants.

4.4. Special warnings and precautions for use

XYLOCAINE 10 mg/0,1 ml should not be used on cuffs of endotracheal tubes (ETT) made of plastic. Lidocaine base in contact with both PVC and non-PVC cuffs of endotracheal tubes may cause damage of the cuff. This damage is described as pinholes, which may cause leakage that could lead to pressure loss in the cuff.

XYLOCAINE 10 mg/0,1 ml is porphyrinogenic *in vitro* and should only be prescribed to patients with acute porphyria on strong or urgent indications. Appropriate precautions should be taken for all porphyric patients.

XYLOCAINE 10 mg/0,1 ml should be given with caution to patients with epilepsy, impaired cardiac conduction, shock, or with liver damage and in patients with severe renal dysfunction.

Doses should be reduced in elderly and debilitated patients, and in children.

Excessive dosage or short intervals between doses may result in high plasma levels and serious adverse effects. Absorption from mucous membranes is variable but is especially high from the bronchial tree.

Such applications may therefore result in rapidly rising or excessive plasma concentrations, with an increased risk for toxic symptoms, such as convulsions. XYLOCAINE 10 mg/0,1 ml should be used with caution in patients with wounds or traumatised mucosa in the region of the proposed application. A damaged mucosa will permit increased systemic absorption. The management of serious adverse reactions may require the use of resuscitative equipment; oxygen and other resuscitative medicines (see section 4.9).

When used in the mouth or throat, XYLOCAINE 10 mg/0,1 ml may impair swallowing and increase the risk of aspiration and patients should be cautioned not to eat for at least 60 minutes after the anaesthetic. Numbness of the tongue or buccal mucosa may increase the danger of biting trauma.

When XYLOCAINE 10 mg/0,1 ml is applied to the respiratory tract of paralysed patients under general anaesthesia, higher blood concentrations may occur than in spontaneously

breathing patients. Unparalysed patients are more likely to swallow a large proportion of the dose which then undergoes considerable first-pass hepatic metabolism following absorption from the gut.

Patients treated with antidysrhythmic medicines class III (e.g. amiodarone) should be under close surveillance and ECG monitoring considered, since cardiac effects may be additive (see section 4.5).

The application of XYLOCAINE 10 mg/0,1 ml to the skin for prolonged periods or to extensive areas should be avoided.

XYLOCAINE 10 mg/0,1 ml should not be given to patients with hypovolaemia, heart block or other conduction disturbances and should be used with caution in patients with congestive heart failure, bradycardia or respiratory depression.

4.5. Interaction with other medicines and other forms of interaction

XYLOCAINE 10 mg/0,1 ml should be used with caution in patients receiving other local anaesthetics or medicines structurally related to amide-type local anaesthetics e.g. antidysrhythmics such as mexiletine and tocainide since the toxic effects are additive. Specific interaction studies with XYLOCAINE 10 mg/0,1 ml and antidysrhythmics medicines class III (e.g. amiodarone) have not been performed, but caution is advised (see section 4.4).

Medicines that reduce the clearance of XYLOCAINE 10 mg/0,1 ml (e.g. cimetidine or betablockers) may cause potentially toxic plasma concentrations when XYLOCAINE 10 mg/0,1 ml is given in repeated high doses.

4.6. Fertility, pregnancy and lactation

The safety of XYLOCAINE 10 mg/0,1 ml in pregnancy and lactation has not been established.

Pregnancy

There is no, or inadequate evidence of the safety of lidocaine, as in XYLOCAINE 10 mg/0,1 ml, in human pregnancy. Animal studies have shown no hazard.

Breastfeeding

Lidocaine, as in XYLOCAINE 10 mg/0,1 ml, enters the mother's milk, but in such small quantities that there is generally no risk of the child being affected at therapeutic dose levels.

4.7. Effects on ability to drive and use machines

XYLOCAINE 10 mg/0,1 ml has a minor influence on the ability to drive and use machines.

Depending on the dose, local anaesthetics may have a very mild effect on mental function and may temporarily impair locomotion and coordination.

4.8. Undesirable effects

a) Tabulated list of adverse reactions

System Organ Class	Less frequent
Immune system disorders	Hypersensitivity reactions (e.g. Anaphylactic reaction, Anaphylactic shock, Anaphylactoid reaction, Angioedema) have been reported

b) Description of selected adverse reactions

Local reactions: Local irritation at the application site has been described. Following application to laryngeal mucosa before endotracheal intubation, reversible symptoms such as sore throat, hoarseness and loss of voice have been reported. The use of XYLOCAINE 10 mg/0,1 ml provides surface anaesthesia during an endotracheal procedure but does not prevent post-intubation soreness.

Systemic reactions: XYLOCAINE 10 mg/0,1 ml may have systemic adverse effects as a result of raised plasma concentrations of lidocaine following excessive dosage or accidental intravenous injection or by absorption of large amounts through mucous membranes, damaged skin or from highly vascular areas. Such reactions may occur acutely.

Systemic toxicity mainly involves the central nervous system and the cardiovascular system.

Excitation of the CNS may be manifested by restlessness, excitement, nervousness, dizziness, tinnitus, blurred vision, nausea and vomiting, muscle twitching, tremors and convulsions.

Excitation may be transient and followed by depression with drowsiness, respiratory failure and coma.

There may be simultaneous effects on the cardiovascular system with myocardial depression and peripheral vasodilation resulting in hypotension and bradycardia; dysrhythmias and cardiac arrest may occur.

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. Healthcare providers are asked to report any suspected adverse reactions to:

SAHPRA: https://www.sahpra.org.za/health-products-vigilance/

Aspen Pharmacare:

E-mail: Drugsafety@aspenpharma.com

Tel: 0800 118 088

4.9. Overdose

Symptoms

Toxic reactions originate mainly in the central nervous and the cardiovascular systems.

Central nervous system toxicity is a graded response with symptoms and signs of escalating severity. The first symptoms are circumoral paraesthesia, numbness of the tongue, light- headedness, hyperacusis and tinnitus. Visual disturbance and muscular tremors are more serious and precede the onset of generalised convulsions. Unconsciousness and grand mal convulsions may follow, which may last from a few seconds to several minutes. Hypoxia and hypercarbia occur rapidly following

convulsions due to the increased muscular activity, together with the interference with normal respiration. In severe cases apnoea may occur. Acidosis increases the toxic effects of the local anaesthetics.

Recovery is due to redistribution and metabolism of the local anaesthetic medicine from the central nervous system. Recovery may be rapid unless large amounts of the medicine have been administered.

Cardiovascular effects are only seen in cases with high systemic concentrations. Severe hypotension, bradycardia, dysrhythmia and cardiovascular collapse may be the result in such cases.

Cardiovascular toxic effects are generally preceded by signs of toxicity in the central nervous system, unless the patient is receiving a general anaesthetic or is heavily sedated with medicines such as a benzodiazepines or barbiturates.

Treatment

The benefit of lipid rescue is built on the concept of the “lipid sink” theory. It is scientifically documented for lipophilic medicines such as some amide type local anaesthetics. Lidocaine is hydrophilic and the benefit of lipid rescue has not been adequately documented.

Severe neurological symptoms (convulsions, CNS depression) must be treated symptomatically by respiratory support and the administration of anticonvulsive medicines.

If circulatory arrest should occur, immediate cardiopulmonary resuscitation should be instituted. Optimal oxygenation and ventilation and circulatory support as well as treatment of acidosis are of vital importance.

5. PHARMACOLOGICAL PROPERTIES

5.1. Pharmacodynamic properties

Category and Class: A.4 Local anaesthetics

Pharmacotherapeutic group: Anaesthetics, Local, Amides

ATC code: N01BB02

Mechanism of action

Lidocaine is a local anaesthetic medicine. When used as a 10 mg/0,1 ml pump spray, it provides surface anaesthesia to mucous membranes.

5.2. Pharmacokinetic properties

Absorption

Lidocaine is absorbed following topical administration to mucous membranes, its rate and extent of absorption being dependent upon the concentration and total dose administered, the specific site of application, and the duration of exposure. In general, the rate of absorption of local anaesthetic medicines following topical application is most rapid after intratracheal and bronchial administration. Such applications may therefore result in rapidly rising or excessive plasma concentrations, with an increased risk of toxic symptoms, such as convulsions especially in children.

Lidocaine is also well absorbed from the gastrointestinal tract, although little of the intact medicine appears in the circulation because of biotransformation in the liver.

Distribution

Normally about 65 % of the lidocaine is bound to plasma proteins. Amide local anaesthetics are mainly bound to alpha-1 acid glycoprotein but also to albumin. The alpha-1 acid glycoprotein has high-affinity, low-capacity sites and albumin has quantitatively less important low-affinity, high-capacity sites.

Lidocaine crosses the blood-brain and placental barriers.

Elimination

The elimination half-life of lidocaine following an intravenous bolus injection is typically 1,5 to 2,0 hours. Because of the rapid rate at which lidocaine is metabolised, any condition that affects liver function may alter lidocaine kinetics. The half-life may be prolonged twofold or more in patients with liver dysfunction. Renal dysfunction does not affect lidocaine kinetics but may increase the accumulation of metabolites.

Factors such as acidosis and the use of CNS stimulants and depressants affect the CNS levels of lidocaine required to produce overt systemic effects. Objective adverse manifestations become increasingly apparent with increasing venous plasma levels from 6,0 µg free base per ml.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Essence of banana, ethanol, levomenthol, polyethylene glycol 400, saccharin and purified water.

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

36 months.

6.4. Special precautions for storage

Store at or below 25 °C in well-closed containers.

6.5. Nature and contents of container

50 ml is packed into a colourless, neutral, moulded glass vial with a plastic and metal pump mechanism (dose valve) with a plastic dip tube suitable for a 50 ml bottle, together with a short, bent polypropylene spray nozzle (applicator) consisting of a cap, tube and tip with hole for spraying.

Each bottle provides 475 spray doses in a 50 ml pack size, with a single use plastic spray nozzle approximately 120 mm long. Additional short spray nozzles are available separately.
Long plastic spray nozzles are available separately.

Not all pack sizes may be marketed.

6.6. Special precautions for disposal

A short plastic spray nozzle is included in each pack. Do not cut or shorten the nozzle.

The short spray nozzle is already bent to its final appearance and no further action is required before using the spray nozzle.

Nozzles should not be reused and should be discarded immediately after use.

Long, sterile plastic spray nozzles are for single use only and must not be boiled or autoclaved again.

7. HOLDER OF CERTIFICATE OF REGISTRATION

PHARMACARE LIMITED

Healthcare Park

Woodlands Drive

Woodmead 2191

8. REGISTRATION NUMBER

G 2826 (Act 101/1965)

9. DATE OF FIRST AUTHORISATION

Not applicable. (Act 101/1965, Old Medicine).

10. DATE OF REVISION OF TEXT

21 June 2023

Die Afrikaanse Professionele Inligting is op versoek beskikbaar. Mediese Blitslyn: 0800 118 088.

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