EasyLube Plus

Sterile Lubricating Jelly with Lidocaine & Chlorhexidine

• LUBRICANT • ANAESTHETIC • ANTISEPTIC

FOR MUCOSAL INSTILLATION

6ml

11ml

INSTRUCTIONS FOR USE

DESCRIPTION

EasyLube Plus (with Lidocaine and Chlorhexidine) is a sterile, clear, single-use, pre-filled syringe with water soluble gel in 6ml and 11ml syringes, used for lubricating of the urethral catheters and other medical devices during urethral application such as catheterization, endoscopy and cystoscopy.

Beside that it can be used for rectal and colonic applications as a lubricant gel.

Lubricating effect of lubricant gel with Lidocaine helps to form a lubricating layer between the catheter or other medical device and the urethral, rectal and colonic mucosa. The patient is relaxed and iatrogenic injures due to spasticity or unquiet are minimalized. Additionally, it reduces infection risk by antiseptic properties; allows a painless procedure by a local anaesthetic effect. This product has been prescribed only for you. Do not pass it on to others. It may harm them, even if their symptoms are the same as yours. Lidocaine hydrochloride is local anesthetic agent to prevent pain while inserting the catheter or medical devices.

EasyLube Plus containing lidocaine is used to slide the urethra prior to catheter administration to aid in the relief of pain associated with urethral, rectal and colonic manipulation. It also provides a painless catheterization with its anesthetic effect. The antiseptic effect of EasyLube Plus protects the patient from infections that may occur in the upper part of the urethra, rectum and colon due to iatrogenic contamination.

INGREDIENTS

100 gram gel contains;

- Pure water,
- Propylene Glycol, Hydroxyethylcellulose (Lubricant)
- Lidocaine Hydrochloride (Local Anesthetic)
- Chlorhexidine Gluconate- 20% concentration (Antiseptic),
- Methyl Hydroxybenzoate (Preservative)
- Propyl Hydroxybenzoate (Preservative)

INDICATIONS

It is indicated for the placement of a catheter or other instruments (catheterization, cystoscopy) into the urethra in females and males and in situations that require local pain relief.

It can also be used as a lubricating gel for rectal and colonic applications.

CONTRAINDICATIONS

The gel must not be used in patients with known hypersensitivity to the active ingredients or any of the excipients. Gel should not be used in patients who have damaged or bleeding mucous membranes because of the risk of systemic absorption of the lidocaine hydrochloride.

WORKING PRINCIPLE

Lidocaine is mainly metabolized in the liver by CYP1A2 and CYP3A4 to two major metabolites, monoethylglycinxylidine (MEGX) and glycinexylidine (GX), both of which are pharmacologically active. Lidocaine has a high hepatic extraction rate. Only a small part (2%) of lidocaine is excreted unchanged in the urine. Hepatic clearance of lidocaine is expected to be largely blood flow dependent. Lidocaine stabilizes the neuronal membrane by inhibiting the ionic fluxes necessary for the initiation and transmission of impulses, thereby affecting the local anesthetic effect. Amide-type local anesthetics are thought to act within sodium channels of the nerve membrane.

EFFECT MECHANISM

Mechanism of Action of Lidocaine: Lidocaine is an amide type local anesthetic. It is used to provide local anesthesia with nerve blockade in various parts of the body. It does this by stabilizing the neuronal membrane by inhibiting the ionic fluxes necessary for the initiation and conduction of impulses, thereby achieving local anesthetic action. In particular, the lidocaine agent acts on sodium ion channels located on the inner surface of nerve cell membranes. In these channels, non-neutrally charged lidocaine molecules diffuse through neural sheaths into the axoplasm, where they are then combined with hydrogen ions and ionized. The resulting lidocaine cations can then reverse the sodium channels from the inside and keep them locked in an open state, which prevents nerve depolarization. Consequently, with sufficient clogging, the membrane of the postsynaptic neuron will eventually not depolarize and therefore will not be able to transmit an action potential. This facilitates an anesthetic effect, not only by preventing the spread of pain signals to the brain, but also by stopping their formation in the first place.

In addition to blocking conduction in nerve axons in the peripheral nervous system, lidocaine has important effects on the central nervous system and cardiovascular system. After absorption, lidocaine can cause stimulation of the CNS and subsequent depression and acts primarily on the myocardium in the cardiovascular system where it can cause reductions in electrical excitability, conduction velocity and contractile force.

Onset of Effect: Depending on the application area, anesthesia is provided within 5 minutes. The duration of anesthesia is about 20 to 30 minutes. Lidocaine is ineffective when applied to intact skin. It only acts on mucous membranes.

Hemodynamics: Lidocaine, like other local anesthetics, may have effects on excitable membranes in the brain and myocardium. If excessive amounts of drug reach the systemic circulation rapidly, symptoms and signs of toxicity from the central nervous and cardiovascular systems will occur.

CNS toxicity (see Overdose) usually precedes cardiovascular effects as it occurs at lower plasma concentrations. Direct effects of local anesthetics on the heart include slow conduction, negative inotropism, and eventual cardiac arrest.

Chlorhexidine digluconate Mechanism of Action: Chlorhexidine is effective against a wide variety of gram-negative and gram-positive plant bacteria, yeasts, dermatophyte fungi and lipophilic viruses. It is ineffective against bacterial spores except at high temperatures. Due to its cationic nature, chlorhexidine binds strongly to the skin, mucous membranes and other tissues and is therefore very poorly absorbed. The antiseptic action of chlorhexidine gluconate is such that microbial organisms normally found in the distal region of the urethra are killed within 5-10 minutes. The elevation or upward displacement of microbial microorganisms following urological interventions is thus largely prevented. Depending on its concentration, it has both bacteriostatic (inhibits bacterial growth) and bactericidal (kills bacteria) action mechanisms. Chlorhexidine kills by disrupting the cell membrane. When applied in vitro, chlorhexidine can kill about 100% of Gram-positive and Gram-negative bacteria within 30 seconds.

ABSORBATION

It provides instant anesthesia and friction-reducing lubrication of the mucous membrane. Lidocaine is absorbed after application to the mucous membranes, anesthesia usually occurs quickly (within 3 to 5 minutes, depending on the application site). Lidocaine can be absorbed following topical application to the mucous membranes, the rate of absorption and the amount of dose absorbed depend on the concentration and the total dose depending on the specific application site and exposure time. The antiseptic action of chlorhexidine gluconate is such that microbial organisms normally found in the distal region of the urethra are killed within 5-10 minutes. The elevation or upward displacement of microbial microorganisms following urological interventions is thus largely prevented. The rate and extent of absorption depend on the concentration, the total dose applied to the specific application site, and the exposure time. In general, the rate of absorption of local anesthetic agents following topical application to wound surfaces and mucous membranes is high and occurs most rapidly after intratracheal and bronchial application.

Pharmacokinetics: The lubricating gel can be absorbed after topical application to the mucous membranes, the rate and extent of absorption vary depending on the concentration and the total dose applied to the specific application site and exposure time. In general, the rate of absorption of local anesthetic agents occurs most rapidly following topical application.

CHG Absorption: Chlorhexidine is poorly absorbed percutaneously from the GI tract and is poorly absorbed after topical application to the skin. Low concentrations of chlorhexidine gluconate appear to be absorbed systemically following intravaginal administration of chlorhexidine gluconate. Following topical application to intact skin, chlorhexidine gluconate is adsorbed to the outer layers of the skin, resulting in a lasting (residual) antimicrobial effect on the skin. Studies using radiolabelled chlorhexidine gluconate show that most of the drug remains in the skin with minimal systemic absorption. There have been some reports of systemic absorption when chlorhexidine gluconate topical preparations are used as a skin cleanser in neonates or infants. Low blood chlorhexidine gluconate concentrations were detected in 15 of 24 infants bathed with chlorhexidine gluconate 4% skin cleanser. Although it has been suggested that chlorhexidine gluconate in the skin may have contaminated heel blood samples, venous blood was obtained from 5 of these neonates, 15 samples indicating low concentrations of the drug. There was also evidence of systemic absorption of low concentrations of chlorhexidine gluconate when using a 1% solution of chlorhexidine in alcohol for umbilical cord care in preterm neonates.

Absorption has not been shown to occur when the same solution is used for umbilical cord care of full-term newborns, or when 3% zinc oxide and 1% chlorhexidine powder are used for such care in preterm neonates. In a study of pregnant women who

received 2% chlorhexidine gluconate solution intravaginally as a vaginal wash during labor, chlorhexidine concentrations (detection limits of 0.01 mcg/mL) were detected in the blood, ranging from 0.01 to 0.083 mcg/mL (detection limit of 0.01 mcg/mL) of approximately 33 % of these women.

CHG Distribution: It is not known whether chlorhexidine gluconate crosses the placenta or is distributed in milk. CHG Excretion: Any chlorhexidine gluconate absorbed percutaneously after topical application to the skin appears to be primarily excreted unchanged in the faeces. Our products degrade 99.86% within 10 days. (EN 10993-13, ASTM F1635)

Absorption amounts of our products do not change in rectal, colon and urethral applications.

WARNINGS

The gel should only be used under the supervision of specialist healthcare personnel. Conditions that are not suitable for the use of gel;

- If you have ever had a reaction to local anesthetics.
- If you have a known allergy or hypersensitivity to parabens, chlorhexidine gluconate or other substances.
- Damaged or bleeding mucous membranes.

Conditions to be considered in the use of the gel;

- If you have a heart problem or if you are taking medication for the treatment of irregular heartbeat
- If you have liver problems.
- If you are epileptic.
- If you are pregnant or breast feeding.

A slight stinging sensation may occur when the gel is first applied; but when the anesthetic effect of the gel starts, this feeling ends in a short time. If you feel a reaction during gel application, you should contact your doctor as soon as possible. In case of a serious side effect or a side effect not specified in the guide, please stop using the product and consult your doctor, pharmacist or manufacturer. If you feel drowsy after using the gel, do not drive or use machinery.

The gel is not used orally. If the gel has been used orally (inserted into your mouth), care should be taken when chewing or swallowing something, as you may unconsciously bite your tongue due to the numbness. Do not use products with damaged packaging or expired products. Keep away from the sun. Store in a dry environment.

Not for children under 2 years of age.

For single use only. If not all of the contents are used, discard together with the gel in the syringe/accordion in accordance with local procedures.

Not used for i/v and i/m injection.

Keep away from children. This product has been prescribed for you only. It does not apply to other users. If it is used by other users, it may harm the user.

PREGNANCY AND BREAST FEEDING

If you are pregnant or think you may be pregnant, tell your doctor. During the first trimester of pregnancy, lidocaine should be used only when necessary. It is used during pregnancy and breast feeding only under the direction of a doctor.

USE OF VEHICLES AND MACHINES

After using EasyLube Plus, the ability to drive and use machines may be slightly impaired. If the effect is felt, it is recommended not to drive or use machinery.

DRUG Interaction

Interaction may occur due to absorption of lidocaine when used together with the following drugs

- Propranolol: Decreased lidocaine plasma clearance,
- Cimetidine: Decreased lidocaine plasma clearance,
- Antiarrhythmic products: Increase in lidocaine toxicity,
- Phenytoin or barbiturates: Lidocaine decrease in plasma level

The indicated interactions can be seen with prolonged and repeated use at high doses.

When administered at recommended doses, no clinically significant interactions have been reported.

Overdose

This gel should not be used with any other medicine or medical device containing a local anesthetic agent. In case of excessive absorption of lidocaine into the blood, central nervous system symptoms and cardiovascular reactions may occur.

HOW TO USE

Dosage recommendations:

For adults; The recommended amount of lidocaine in a 24-hour period is max 800 mg. (3 x 11 ml syringe) (6 x 6 ml syringe).

For children (2-15 years old); Max. 0.3ml gel/kg BW (≅6mg lidocaine/kg) per procedure. No more than 4 doses should be administered within 24 hours.

Do not use lidocaine-containing slider gel for children under 2 years of age.

The decision of the size of EasyLube Plus Lidocaine Lubricating Gel to be used is made by the doctor.

- Remove the (6ml/11ml) by tearing off the sterile packaging.
- Remove the stopper from the end of the Syringe. Dispense a drop of gel to facilitate application.
- After placing the syringe tip on the area to be lubricated, gently squeeze some EasyLube Plus Lidocaine Lubricating Gel by pressing the plunger of the syringe.

NOTE: In pediatric applications, the gel is applied to the desired area, not directly on the device.

The slider feature of the gel shows its effect as soon as the application starts. The anesthetic effect starts after 3-5 minutes.

SIDE EFFECTS

Lidocaine and Chlorhexidine-containing lubricating gel may cause side effects in some people. Although EasyLube Plus has wide proven safety margins, its use on damaged mucosa may produce adverse effects due to lidocaine absorption. Systemic reactions to lidocaine or chlorhexidine, local hypersensitivity reactions such as redness, burning, itching, rash may be seen rarely. There are also risks of serious reactions such as drop in blood pressure, dizziness, nausea, shortness of breath, bradycardia, convulsions and anaphylactic shock. The use of products containing lidocaine may cause *methemoglobinemia.

DRUG Interaction

Local anesthetics and agents structurally related to amide-type local anesthetics EasyLube Plus should be used with caution in patients receiving other local anesthetics or agents structurally related to amide-type local anesthetics (eg, antiarrhythmics such as mexiletine) because toxic effects may occur.

Antiarrhythmic Drugs:-

Class I Antiarrhythmic drugs:- Class I antiarrhythmic drugs (such as mexiletine) should be used with caution as their toxic effects are additive and potentially synergistic.

Class III Antiarrhythmic drugs:-Caution is recommended when Class III antiarrhythmic drugs are co-administered with lidocaine because of potential pharmacodynamic or pharmacokinetic interactions or both with lidocaine. A drug interaction study has shown that lidocaine plasma concentration may increase following administration of a therapeutic intravenous dose of lidocaine to patients (n = 6) treated with amiodarone. Case reports have described toxicity in patients treated with lidocaine and amiodarone. Patients treated with Class III antiarrhythmic drugs (eg, amiodarone) should be kept under close surveillance and ECG monitoring should be considered, as the cardiac effects of these drugs and lidocaine may be additive.

β-Blockers: Propranolol has been reported to reduce intravenous lidocaine clearance by up to 47%, possibly by reducing liver blood flow and/or inhibiting microsomal liver enzymes. This effect is less than that reported for strong CYP1A2 inhibitors, but in the same order as for strong CYP3A4 inhibitors. However, a clinically significant interaction with propranolol should only be considered during long-term therapy. Potent Inhibitors of CYP1A2 and CYP3A4: Cytochromes CYP1A2 and CYP3A4 are involved in the formation of MEGX.

Fluvoxamine: The plasma clearance of intravenous lidocaine in vivo was decreased by 41 to 60% during co-administration of fluvoxamine, a selective and potent inhibitor of CYP1A2. Strong CYP1A2 inhibitors, such as fluvoxamine, given during prolonged administration of lidocaine to areas with high systemic absorption may cause a metabolic interaction leading to increased lidocaine plasma concentration.

Erythromycin and Itraconazole: The potent CYP3A4 inhibitors, Erythromycin and Itraconazole, showed a slight 9 to 18% reduction in lidocaine clearance. During combined administration with fluvoxamine and erythromycin, plasma clearance of lidocaine decreased by 53%.

Drug-Food Interactions Interactions of lidocaine and chlorhexidine with food have not been determined. Drug-Herbal Interactions The interactions of lidocaine and chlorhexidine with herbal products have not been determined.

Interactions of Drug-Laboratory Tests: Interactions of lidocaine and chlorhexidine with laboratory tests have not been determined. Drug-Lifestyle Interactions Lifestyle interactions of lidocaine and chlorhexidine have not been determined.

The mentioned interactions can be seen in long-term and repeated use at high doses. No clinically significant interactions have been reported when administered at recommended doses.

DOSAGE AND MANAGEMENT

Dose Considerations

When used with other products containing lidocaine, the total dose of lidocaine contributed by all formulations should be kept in mind.

Special Populations

Lidocaine can also be used for epilepsy, impaired cardiac conduction, bradycardia should be used with caution in patients with impaired liver or kidney function and in severe shock **(see WARNINGS AND PRECAUTIONS).**

Weakened patients, elderly patients, acutely ill patients, patients with sepsis, and children should be given reduced doses appropriate to their age, weight, and physical condition **(see WARNINGS AND PRECAUTIONS).**

EasyLube Plus should be used with caution in children under 2 years of age as there is currently insufficient data to support the safety and efficacy of this product in this

patient population **(see WARNINGS AND PRECAUTIONS**).

Recommended Dosage and Dose Adjustment

Urethral anesthesia, lubrication and antiseptic effect: Male Adult Urethra: 11 mL and possibly 6 or 11 mL additional.

The entire urethral area, including the external sphincter, should be covered with a lubricating film and anesthesia should be applied for germ-free and painless placement of instruments.

A penile clamp is placed in the sulcus coronarius region.

When anesthesia is particularly important, for example during drilling or cystoscopy, a larger amount of gel (eg, 28 to 39 mL) may be dripped into 3 to 4 servings and allowed to act for 10 to 12 minutes prior to instrument insertion. A 28 mL dose can be obtained using the contents of two 11 mL syringes and one 6 mL syringe; A 39 mL dose can be obtained using the contents of three 11 mL syringes and one 6 mL syringe. The gel dripped into the bladder at these doses is also effective for procedures in this area.

Instill 6 or 11 mL to anesthetize, lubricate, and provide anterior male urethral antisepsis only, eg for catheterization. After normal cleaning of the glans and external urethral opening, gently insert EasyLube Plus into the urethra, compressing the glans until the local anesthetic and antiseptic effect begins.

Female Adult Urethra: Dispense 6 mL of gel in small portions to fill the entire urethra. If desired, some gel can be deposited on the hole and closed with a cotton swab.

In order to achieve adequate anesthesia and antiseptic effect, it should be waited for 5-10 minutes before urological procedures are performed.

OVERDOSE

Acute systemic toxicity from local anesthetics is usually associated with high plasma levels encountered during therapeutic use of local anesthetics and originates primarily from the central nervous and cardiovascular systems.

Limited information is available on the acute toxicity of chlorhexidine gluconate following accidental ingestion of the drug. The acute effects of accidental ingestion of chlorhexidine gluconate are usually associated only with high doses; If a small amount of the drug is swallowed, the likelihood of side effects is low.

Symptoms: CNS toxicity is a gradual response with symptoms and signs of increasing severity. Initial symptoms are paresthesia around the mouth, numbness of the tongue, dizziness, hyperacusis, and tinnitus. Visual impairment and muscle tremors are more serious and precede the onset of generalized convulsions. This may be followed by loss of consciousness and major convulsions, which can last from a few seconds to several minutes. Hypoxia and hypercarbia occur rapidly after convulsions due to increased muscle activity with interference with normal breathing. In severe cases, apnea may occur. Acidosis increases the toxic effects of local anesthetics.

Recovery is dependent on the redistribution and metabolism of the local anesthetic drug. Recovery may be rapid unless the drug is administered in large quantities.

Cardiovascular effects may occur at high systemic concentrations. In such cases, severe hypotension may result from bradycardia, arrhythmia, and cardiovascular collapse.

Signs of toxicity in the CNS usually precede cardiovascular toxic effects unless the patient is receiving general anesthesia or is heavily sedated with drugs such as benzodiazepines or barbiturates.

The first step in the management of systemic toxic reactions consists of immediate attention to the maintenance of a patented airway and oxygen-assisted or controlled ventilation and a delivery system that can allow immediate positive airway pressure with the mask. This can prevent convulsions if they haven't happened before. If convulsions occur, the goal of treatment is to maintain ventilation and oxygenation and support circulation. Oxygen should be given and ventilation assistance provided if necessary (mask and bag or tracheal intubation). If convulsions do not stop spontaneously after 15-20 seconds, an anticonvulsant should be given iv to facilitate adequate ventilation and oxygenation. Thiopental sodium 1-3 mg/kg iv is the first choice. Alternatively, diazepam 0.1 mg/kg bw iv can be used, but the effect will be slow. Prolonged convulsions may compromise the patient's ventilation and oxygenation. If so, an injection of a muscle relaxant (eg succinylcholine 1 mg/kg bw) facilitates ventilation and oxygenation can be controlled. Early endotracheal intubation is required when succinylcholine is used to control motor seizure activity.

If there is cardiovascular depression (hypotension, bradycardia), ephedrine should be given 5 to 10 mg IV and repeated after 2 to 3 minutes if necessary.

If circulatory arrest occurs, cardiopulmonary resuscitation should be initiated immediately. Treatment of acidosis with optimal oxygenation and ventilation and circulatory support is vital, as hypoxia and acidosis will increase the systemic toxicity of local anesthetics. Epinephrine (0.1 to 0.2 mg iv or intracardial injections) should be given as soon as possible and repeated if necessary.

Children should be given doses proportional to their age and weight.

If taken orally, treat with gastric lavage using milk, raw eggs, gelatin or mild soap. Implement supportive measures as appropriate (see above).

Accidental iv infusion: Blood transfusion may be necessary to counteract haemolysis.

STORAGE CONDITIONS

The metering on the syringes is for user orientation purposes. There is no measurement function. Store at 5º-30ºC until the expiry date. Keep dry and out of direct sunlight.

STERILIZATION

EasyLube plus is supplied sterile. After being packaged, it is sterilized with Gamma and offered for sale. Do not rasterise.

PACKAGING

The gel is supplied as sterile in disposable packages, prefilled in 6ml (≈6g), 11ml (≈11g) in syringe.

EasyLube Plus 6 ml (25x6 ml/ Box)

EasyLube Plus 11 ml (25x11ml/ Box)

SYMBOLS

STERILE R	Sterilized with irradiation		Not for reuse
30°C 5°C	Storage temperature	STERILIZE	Do not re-sterilize
	Pay attention to instructions for use		Expire date
LOT	Lot number		Date of manufacture
	Keep away from sunlight		Keep dry
MD	Medical Device	REF	Referance number
LATEX	Latex Free		Caution
	Do not use if package is damaged		Double sterile barrier system

CE 1783 CE number commensurate with MDD 93/42/EEC
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