PRODUCT MONOGRAPH

JELIDO™
(Lidocaine Hydrochloride jelly, USP)
20 mg/mL

Topical Anesthetic

PENDOPHARM, Division of Pharmascience Inc.
6111 Royalmount Avenue, suite 100
Montréal, Quebec
H4P 2T4

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PART I: HEALTH PROFESSIONAL INFORMATION

SUMMARY PRODUCT INFORMATION

Route of administration	Dosage Form / Strength	Clinically Relevant Nonmedicinal Ingredients
Topical	Single use plastic syringe (6 mL and 11 mL), Lidocaine HCl, 20 mg/mL	None

INDICATIONS AND CLINICAL USE

Adults (>18 years of age)
JELIDO™ (lidocaine hydrochloride jelly) is indicated for surface anaesthesia and lubrication for:

- The male and female urethra during cystoscopy, catheterization, exploration by sound and other endourethral operations;
- Nasal and pharyngeal cavities in endoscopic procedures such as gastroscopy and bronchoscopy;
- Proctoscopy and rectoscopy;
- Tracheal intubation.

Symptomatic treatment of pain in connection with cystitis and urethritis.

Geriatrics (> 65 years of age)
Elderly patients should be given reduced doses commensurate with their age and physical condition (see DOSAGE AND ADMINISTRATION – Special Populations).

Pediatrics (<18 years of age)
Children should be given reduced doses commensurate with their age, weight and physical condition (see DOSAGE AND ADMINISTRATION – Special Populations).

Lidocaine should be used with caution in children younger than 2 years of age as there are insufficient data to support the safety and efficacy of this product in this patient population at this time (see WARNINGS AND PRECAUTIONS – Special Populations).

CONTRAINDICATIONS

JELIDO (lidocaine hydrochloride) is contraindicated in:

- Patients with a known history of hypersensitivity to local anesthetics of the amide type or to other components in the formulation (see DOSAGE FORMS, COMPOSITION AND PACKAGING).

WARNINGS AND PRECAUTIONS

General

EXCESSIVE DOSAGE, OR SHORT INTERVALS BETWEEN DOSES, CAN RESULT IN HIGH PLASMA LEVELS OF LIDOCAINE OR ITS METABOLITES AND SERIOUS ADVERSE EFFECTS. Absorption from the 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. PATIENTS SHOULD BE INSTRUCTED TO STRICTLY ADHERE TO THE RECOMMENDED DOSAGE. This is especially important in children where doses vary with weight. The management of serious adverse reactions may require the use of resuscitative equipment, oxygen and other resuscitative drugs (see OVERDOSAGE).

The lowest dosage that results in effective anaesthesia should be used to avoid high plasma levels and serious adverse effects. Tolerance to elevated blood levels varies with the status of the patient.

Lidocaine should be used with caution in patients with sepsis and/or traumatized mucosa at the area of application, since under such conditions there is the potential for rapid systemic absorption.

JELIDO should be used with caution in children under the age of 2 years as there is insufficient data to support the safety and efficacy of this product in this patient population at this time.

In patients under general anesthesia who are paralyzed, higher plasma 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.

Avoid contact with eyes.

Many drugs used during the conduct of anesthesia are considered potential triggering agents for familial malignant hyperthermia. It has been shown that the use of amide local anesthetics in malignant hyperthermia patients is safe. However, there is no guarantee that neural blockade will prevent the development of malignant hyperthermia during surgery. It is also difficult to predict the need for supplemental general anesthesia. Therefore, a standard protocol for the management of malignant hyperthermia should be available.

When used for endotracheal tube lubrication, care should be taken to avoid introduction of the jelly into the lumen of the tube. If allowed into the inner lumen, the jelly may dry on the inner surface, leaving a residue which tends to clump with flexion, narrowing the lumen. There have been rare reports in which this residue has caused the lumen to occlude. Similarly, do not use the jelly to lubricate the endotracheal stylettes.

When topical anesthetics are used in the mouth, the patient should be aware that the production of topical anesthesia might impair swallowing and thus enhance the danger of aspiration. Numbness of the tongue or buccal mucosa may enhance the danger of unintentional biting trauma. Food or chewing gum should not be taken while the mouth or throat area is anaesthetized. See also Part III: Patient Medication Information.

JELIDO is ineffective when applied to intact skin.

Lidocaine has been shown to be porphyrinogenic in animal models. JELIDO should only be prescribed to patients with acute porphyria on strong or urgent indications, when they can be closely monitored. Appropriate precautions should be taken for all porphyric patients.

Carcinogenesis and Mutagenesis

Genotoxicity tests with lidocaine showed no evidence of mutagenic potential. A metabolite of lidocaine, 2,6-dimethylaniline, showed weak evidence of activity in some genotoxicity tests. A chronic oral toxicity study of the metabolite 2,6-dimethylaniline (0, 14, 45, 135 mg/kg) administered in feed to rats showed that there was a significantly greater incidence of nasal cavity tumors in male and female animals that had daily oral exposure to the highest dose of 2,6-dimethylaniline for 2 years. The lowest tumor-inducing dose tested in animals (135 mg/kg) corresponds to approximately 50 times the amount of 2,6-dimethylaniline to which a 50 kg subject would be exposed following the application of 20 g of lidocaine jelly 2% for 24 hours on the mucosa, assuming the highest theoretical extent of absorption of 100% and 80% conversion to 2,6-dimethylaniline. Based on a yearly exposure (once daily dosing with 2,6-dimethylaniline in animals and 5 treatment sessions with 20 g lidocaine jelly 2% in humans), the safety margins would be approximately 3400 times when comparing the exposure in animals to man.

Cardiovascular

Lidocaine should be used with caution in patients with bradycardia or impaired cardiovascular function since they may be less able to compensate for functional changes associated with the prolongation of A-V conduction produced by amide-type local anesthetics.

Lidocaine should be used with caution in patients in severe shock.

Hepatic

Because amide-type local anesthetics such as lidocaine are metabolized by the liver, these drugs, especially repeated doses, should be used cautiously in patients with hepatic disease. Patients with severe hepatic disease, because of their inability to metabolize local anesthetics normally, are at greater risk of developing toxic plasma concentrations.

Neurologic

Epilepsy
The risk of central nervous system side effects when using lidocaine in patients with epilepsy is very low, provided that the dose recommendations are followed (see DOSAGE AND ADMINISTRATION).

Locomotion and Coordination
Topical lidocaine formulations generally result in low plasma concentrations because of a low degree of systemic absorption. However, depending on the dose, local anesthetics may have a very mild effect on mental function and coordination even in the absence of overt CNS toxicity and may temporarily impair locomotion and alertness.

Renal

Lidocaine is metabolized primarily by the liver to monoethylglycinexylidine (MEGX, which has some CNS activity), and then further to metabolites glycinexylidine (GX) and 2,6- dimethylaniline (see ACTION AND CLINICAL PHARMACOLOGY). Only a small fraction (2%) of lidocaine is excreted unchanged in the urine. The pharmacokinetics of lidocaine and its main metabolite were not altered significantly in haemodialysis patients (n=4) who received an intravenous dose of lidocaine. Therefore, renal impairment is not expected to significantly affect the pharmacokinetics of lidocaine when JELIDO is used for short treatment durations, according to dosage instructions (see DOSAGE AND ADMINISTRATION). Caution is recommended when lidocaine is used in patients with severely impaired renal function because lidocaine metabolites may accumulate during long term treatment (see DOSAGE AND ADMINISTRATION).

Sensitivity

Lidocaine should be used with caution in persons with known drug sensitivities.

JELIDO is contraindicated in patients with known hypersensitivities to local anesthetics of the amide type and to other components in the formulation.

Special Populations

Debilitated patients, acutely ill patients and patients with sepsis should be given reduced doses commensurate with their age, weight and physical condition, because they may be more sensitive to systemic effects due to increased blood levels of lidocaine following repeated doses.

Pregnant Women
There are no adequate and well-controlled studies in pregnant women on the effect of lidocaine on the developing fetus.

It is reasonable to assume that a large number of pregnant women and women of childbearing age have been given lidocaine. No specific disturbances to the reproductive process have so far been reported, e.g., no increased incidence of malformations. However, care should be given during early pregnancy when maximum organogenesis takes place.

Labour and Delivery
Lidocaine is not contraindicated in labour and delivery. Should JELIDO be used concomitantly with other products containing lidocaine during labour and delivery, the total dose contributed by all formulations must be kept in mind.

Nursing Women
Lidocaine and its metabolites are excreted in breast milk. At therapeutic doses, the quantities of lidocaine and its metabolites in breast milk are small and generally are not expected to be a risk to the infant.

Pediatrics
Children should be given reduced doses commensurate with their age, weight and physical condition, because they may be more sensitive to systemic effects due to increased blood levels of lidocaine following repeated doses (see DOSAGE AND ADMINISTRATION).

JELIDO should be used with caution in children under the age of 2 years as there are insufficient data to support the safety and efficacy of this product in this patient population at this time.

Geriatrics
Elderly patients may be more sensitive to systemic effects due to increased blood levels of lidocaine following repeated doses and may require dose reductions.

ADVERSE REACTIONS

Adverse experiences following the administration of lidocaine are similar in nature to those observed with other amide local anesthetic agents. These adverse experiences are, in general, dose-related and may result from high plasma levels caused by overdosage or rapid absorption, or may result from a hypersensitivity, idiosyncrasy or diminished tolerance on the part of the patient.

An increased incidence of postoperative sore throat has been reported following endotracheal tube lubrication with lidocaine jelly.

Serious adverse experiences are generally systemic in nature. The following types are those most commonly reported:

Central Nervous System
CNS manifestations are excitatory and/or depressant and may be characterized by the following signs and symptoms of escalating severity: circumoral paresthesia, light-headedness, nervousness, apprehension, euphoria, confusion, dizziness, drowsiness, hyperacusis, tinnitus, blurred vision, vomiting, sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness, respiratory depression and arrest. The excitatory manifestations (e.g., twitching, tremors, convulsions) may be very brief or may not occur at all, in which case the first manifestation of toxicity may be drowsiness merging into unconsciousness and respiratory arrest.

Drowsiness following the administration of lidocaine is usually an early sign of a high lidocaine plasma level and may occur as a consequence of rapid absorption.

Cardiovascular System
Cardiovascular manifestations are usually depressant and are characterized by bradycardia, hypotension, arrhythmia and cardiovascular collapse, which may lead to cardiac arrest.

Allergic
Allergic reactions are characterized by cutaneous lesions, urticaria, oedema or, in the most severe instances, anaphylactic shock. Allergic reactions of the amide type are rare and may occur as a result of sensitivity either to the local anesthetic agent or to other components in the formulation (see DOSAGE FORMS, COMPOSITION AND PACKAGING).

DRUG INTERACTIONS

Overview
Lidocaine is mainly metabolized in the liver by CYP1A2 and CYP3A4 to its two major metabolites, monoethylglycinexylidine (MEGX) and glycinexylidine (GX), both of which are pharmacologically active. Lidocaine has a high hepatic extraction ratio. Only a small fraction (2%) of lidocaine is excreted unchanged in the urine. The hepatic clearance of lidocaine is expected to depend largely on blood flow.

Strong inhibitors of CYP1A2, such as fluvoxamine, given concomitantly with lidocaine, can cause a metabolic interaction leading to an increased lidocaine plasma concentration.

Therefore, prolonged administration of lidocaine should be avoided in patients treated with strong inhibitors of CYP1A2, such as fluvoxamine. When coadministered with intravenous lidocaine, two strong inhibitors of CYP3A4, erythromycin and itraconazole, have each been shown to have a modest effect on the pharmacokinetics of intravenous lidocaine. Other drugs such as propranolol and cimetidine have been reported to reduce intravenous lidocaine clearance, probably through effects on hepatic blood flow and/or metabolism.

When lidocaine is used topically, plasma concentrations are of importance for safety reasons (see WARNINGS AND PRECAUTIONS, General; ADVERSE REACTIONS). However, with the low systemic exposure and short duration of topical application, the abovementioned metabolic drug-drug interactions are not expected to be of clinical significance when JELIDO is used according to dosage recommendations.

Clinically relevant pharmacodynamic drug interactions may occur with lidocaine and other local anesthetics or structurally related drugs, and with Class I and Class III antiarrhythmic drugs due to additive effects.

Drug-Drug Interactions

Local anesthetics and agents structurally related to amide-type local anesthetics
Lidocaine should be used with caution in patients receiving other local anesthetics or agents structurally related to amide-type local anesthetics (e.g., antiarrhythmics such as mexiletine), since the toxic effects are additive.

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

Class III Antiarrhythmic drugs
Caution is advised when using Class III antiarrhythmic drugs concomitantly with lidocaine due to potential pharmacodynamic or pharmacokinetic interactions with lidocaine, or both. A drug interaction study has shown that the plasma concentration of lidocaine may be increased following administration of a therapeutic dose of intravenous lidocaine to patients treated with amiodarone (n=6). Case reports have described toxicity in patients treated concomitantly with lidocaine and amiodarone. Patients treated with Class III antiarrhythmic drugs (e.g., amiodarone) should be kept under close surveillance and ECG monitoring should be considered, since cardiac effects of these drugs and lidocaine may be additive.

Strong Inhibitors of CYP1A2 and CYP3A4
Cytochrome CYP1A2 and CYP3A4 are involved in the formation of MEGX.

Fluvoxamine: Strong inhibitors of CYP1A2, such as fluvoxamine, given during prolonged administration of lidocaine to areas with a high extent of systemic absorption (e.g., mucous membranes) can cause a metabolic interaction leading to an increased lidocaine plasma concentration. The plasma clearance of a single intravenous dose of lidocaine was reduced by 41 to 60% during co-administration of fluvoxamine, a selective and potent CYP1A2 inhibitor, to healthy volunteers.

Erythromycin and Itraconazole: Erythromycin and itraconazole, which are strong inhibitors of CYP3A4, have been shown to reduce clearance of lidocaine by 9 to 18%, following a single intravenous dose of lidocaine to healthy volunteers.

During combined coadministration with fluvoxamine and erythromycin, the plasma clearance of lidocaine was reduced by 53%.

β-blockers and Cimetidine
Following a single intravenous dose of lidocaine administered to healthy volunteers, the clearance of lidocaine has been reported to be reduced up to 47% when co-administered with propranolol and up to 30% when coadministered with cimetidine. Reduced clearance of lidocaine, when coadministered with these drugs, is probably due to reduced liver blood flow and/or inhibition of microsomal liver enzymes. The potential for clinically significant interactions with these drugs should be considered during long-term treatment with high doses of lidocaine.

Drug-Food Interactions

Interactions of lidocaine with food have not been established.

Drug-Herb Interactions

Interactions of lidocaine with herbal products have not been established.

Drug-Laboratory Tests Interactions

Interactions of lidocaine with laboratory tests have not been established.

Drug-Lifestyle Interactions

Interactions of lidocaine with lifestyle have not been established. DOSAGE AND ADMINISTRATION

DOSAGE AND ADMINISTRATION

Dosing Considerations

General

When JELIDO (lidocaine hydrochloride) is used concomitantly with other products containing lidocaine, the total dose contributed by all formulations must be kept in mind.

- JELIDO in the plastic syringe is preservative-free and intended for single use only. The syringe is graduated, i.e., a 3 mm line of jelly is equivalent to approximately 1 mL of jelly (20 mg lidocaine hydrochloride).

The absorption of lidocaine jelly from the nasopharynx is usually lower than with other lidocaine products. Blood concentrations of lidocaine after instillation of the jelly in the intact urethra and bladder in doses up to 800 mg are fairly low and below toxic levels.

Special Populations

Lidocaine should also be used with caution in patients with epilepsy, impaired cardiac conduction, bradycardia, impaired hepatic or renal function and in severe shock (see WARNINGS AND PRECAUTIONS).

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

JELIDO should be used with caution in children under the age of 2 years as there is insufficient data to support the safety and efficacy of this product in this patient population at this time (see WARNINGS AND PRECAUTIONS).

Recommended Dose and Dosage Adjustment

When fully compressed, each 1 x 12.5 g syringe will express approximately 10 g (corr. to 9.4 mL) JELIDO (200 mg lidocaine hydrochloride).

Urethral Anaesthesia

Surface Anesthesia of the Male Adult Urethra

For adequate analgesia in males, 20 mL (400 mg lidocaine hydrochloride) jelly is usually required. The jelly is instilled slowly until the patient has a feeling of tension (approximately 10 mL) (200 mg). A penile clamp is then applied for several minutes at the corona, after which the rest of the jelly is instilled.

When anaesthesia is especially important, e.g., during sounding or cystoscopy, a larger quantity of jelly (e.g., 30-40 mL) may be instilled in 3-4 portions and allowed to act for 10 to 12 minutes before insertion of the instrument. The jelly instilled into the bladder is also effective for procedures in this region.

To anesthetize only the anterior male urethra, e.g., for catheterization, small volumes (5-10 mL, i.e., 100-200 mg lidocaine HCl) are usually adequate for lubrication.

For Surface Anesthesia of the Female Adult Urethra

Instill 5-10 mL of jelly in small portions to fill the whole urethra. If desired, some jelly may be deposited on the orifice and covered with a cotton swab. In order to obtain adequate anesthesia, several minutes should be allowed prior to performing urological procedures.

Endoscopy

The instillation of 10-20 mL is recommended for adequate analgesia and a small amount may be applied to the lubricating instrument. When combined with other lidocaine products (e.g., for bronchoscopy), the total dose of lidocaine should not exceed 400 mg.

Proctoscopy and Rectoscopy

Up to 20 mL can be used for anal and rectal procedures. The total dose should not exceed 400 mg lidocaine.

Lubrication for Endotracheal Intubation

Apply approximately 2 mL of jelly to the external surface of the endotracheal tube just prior to insertion. Care should be taken to avoid introducing the product into the lumen of the tube (see WARNINGS AND PRECAUTIONS). Do not use the jelly to lubricate endotracheal stylettes. It is also recommended that the use of endotracheal tubes with dried jelly on the external surface be avoided for lack of lubricating effect.

Maximum Dosage

Adults
The dose of JELIDO depends on the application site. A safe dose for oral use is 400 mg (20 mL). A safe dose for use in the urethra and bladder is 800 mg (40 mL). A maximum single dosage for JELIDO is not established. No more than four doses should be given during a 24-hour period.

Children (Under 12 Years)
It is difficult to recommend a maximum dose of any drug for children since this varies as a function of age and weight. The maximum amount per dose of JELIDO should not exceed 6 mg/kg of body weight or 3 mL per 10 kg weight. No more than four doses should be given during a 24-hour period.

For children over 12 years of age, doses should be commensurate with weight and physical condition.

OVERDOSAGE

Acute systemic toxicity from local anesthetics is generally related to high plasma levels encountered during therapeutic use of local anesthetics and originates mainly in the central nervous and the cardiovascular systems (see ADVERSE REACTIONS, WARNINGS and PRECAUTIONS). It should be kept in mind that clinically relevant pharmacodynamics drug interactions (i.e., toxic effects) may occur with lidocaine and other local anesthetics or structurally related drugs, and Class I and Class III antiarrhythmic drugs due to additive effects (see DRUG INTERACTIONS).

Symptoms

Central nervous system toxicity is a graded response, with symptoms and signs of escalating severity. The first symptoms are circumoral paresthesia, numbness of the tongue, light-headedness, hyperacusis and tinnitus. Visual disturbance and muscular tremors are more serious and precede the onset of generalized 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, apnea may occur. Acidosis, hyperkalaemia, hypocalcaemia and hypoxia increases and extend the toxic effects of local anesthetics.

Recovery is due to redistribution and metabolism of the local anesthetic drug. Recovery may be rapid unless large amounts of the drug have been administered.

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

Cardiovascular toxic effects are generally preceded by signs of toxicity in the CNS, unless the patient is receiving a general anesthetic or is heavily sedated with drugs such as a benzodiazepine or barbiturate.

Treatment

The first consideration is prevention, best accomplished by careful and constant monitoring of cardiovascular and respiratory vital signs and the patient's state of consciousness after each local anesthetic administration. At the first sign of change, oxygen should be administered.

The first step in the management of systemic toxic reactions consists of immediate attention to the maintenance of a patent airway and assisted or controlled ventilation with oxygen and a delivery system capable of permitting immediate positive airway pressure by mask. This may prevent convulsions if they have not already occurred.

If convulsions occur, the objective of the treatment is to maintain ventilation and oxygenation and support circulation. Oxygen must be given and ventilation assisted if necessary (mask and bag or tracheal intubation). Should convulsions 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 may be used, although its action will be slow. Prolonged convulsions may jeopardize the patient's ventilation and oxygenation. If so, injection of a muscle relaxant (e.g., succinylcholine 1 mg/kg bw) will facilitate ventilation, and oxygenation can be controlled. Early endotracheal intubation is required when succinylcholine is used to control motor seizure activity.

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

Should circulatory arrest occur, immediate cardiopulmonary resuscitation should be instituted. Optimal oxygenation and ventilation and circulatory support, as well as treatment of acidosis, are of vital importance, since hypoxia and acidosis will increase the systemic toxicity of local anesthetics. Epinephrine (0.1-0.2 mg IV or intracardial injections) should be given as soon as possible and repeated, if necessary.

Children should be given doses commensurate with their age and weight.

For management of a suspected drug overdose, contact your regional Poison Control Centre.

ACTION AND CLINICAL PHARMACOLOGY

Mechanism of Action

Lidocaine stabilizes the neuronal membrane by inhibiting the ionic fluxes required for the initiation and conduction of impulses, thereby effecting local anesthetic action. Local anesthetics of the amide type are thought to act within the sodium channels of the nerve membrane.

Onset of Action

Anesthesia is achieved within 5 minutes, depending on the area of application. Duration of anesthesia is approximately 20 to 30 minutes. JELIDO (lidocaine hydrochloride) is ineffective when applied to intact skin.

Hemodynamics

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

Central nervous system toxicity (see OVERDOSAGE) usually precedes the cardiovascular effects, since it occurs at lower plasma concentrations. Direct effects of local anesthetics on the heart include slow conduction, negative inotropism and eventually cardiac arrest.

Pharmacokinetics

Absorption

The rate and extent of absorption depends upon concentration and total dose administered, the specific site of application and duration of exposure. 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 administration. The absorption of lidocaine jelly from the nasopharynx is usually lower than with other lidocaine products. Blood concentrations of lidocaine after instillation of the jelly in the intact urethra and bladder in doses up to 800 mg are fairly low and below toxic levels. Lidocaine is also well absorbed from the gastrointestinal tract, although little intact drug may appear in the circulation because of biotransformation in the liver.

Distribution

Lidocaine has a total plasma clearance of 0.95 L/min and a volume of distribution at steady state of 91 L.

Lidocaine readily crosses the placenta, and equilibrium in regard to free, unbound drug will be reached. Because the degree of plasma protein binding in the fetus is less than in the mother, the total plasma concentration will be greater in the mother, but the free concentrations will be the same.

The plasma binding of lidocaine is dependent on drug concentration, and the fraction bound decreases with increasing concentration. At concentrations of 1to 4 mcg of free base per mL, 60% to 80% of lidocaine is protein bound. Binding is also dependent on the plasma concentration of the alpha-1-acid glycoprotein. Lidocaine crosses the blood-brain and placental barriers, presumably by passive diffusion.

Metabolism

Lidocaine is rapidly metabolized by the liver and its metabolites and the unchanged drug are excreted by the kidneys. Biotransformation includes oxidative N-dealkylation, ring hydroxylation,

cleavage of the amide linkage and conjugation. Only 2% of lidocaine is excreted unchanged. Most of it is metabolized first to monoethylglycinexylidine (MEGX) and then to glycinexylidine (GX) and 2,6-xylidine. Up to 70% appears in the urine as 4-hydroxy-2,6-xylidine. The pharmacological/toxicological actions of MEGX and GX are similar to but less potent than those of lidocaine. GX has a longer half-life (about 10 h) than lidocaine and may accumulate during long-term administration.

Excretion
Lidocaine has an elimination half-life of 1.6 h and an estimated hepatic extraction ratio of 0.65. The clearance of lidocaine is almost entirely due to liver metabolism, and depends both on liver blood flow and the activity of metabolizing enzymes. Approximately 90% of the lidocaine administrated intravenously is excreted in the form of various metabolites, and less than 10% is excreted unchanged in the urine. The primary metabolite in urine is a conjugate of 4-hydroxy-2,6-xylidine, accounting for about 70%-80% of the dose excreted in the urine.

The elimination half-life of lidocaine following an intravenous bolus injection is typically 1.5 to 2.0 hours. The elimination half-life in neonates (3.2 h) is approximately twice that of adults. The half-life may be prolonged two-fold or more in patients with liver dysfunction. Renal dysfunction does not affect lidocaine kinetics but may increase the accumulation of metabolites.

Special Populations and Conditions
Acidosis increases the systemic toxicity of lidocaine while the use of CNS depressants may increase the levels of lidocaine required to produce overt CNS effects. Objective adverse manifestations become increasingly apparent with increasing venous plasma levels above 6.0 mcg as free base per mL.

STORAGE AND STABILITY

Store between 15°C and 30°C.

DOSAGE FORMS, COMPOSITION AND PACKAGING

Dosage Form

JELIDO (lidocaine hydrochloride) is a clear, nearly colorless jelly. The vehicle of the active ingredient consists of water, thickened with hydroxypropyl methylcellulose. Its water-miscible base, characterized by high viscosity and low surface tension, allows close and prolonged contact with mucous membrane.

Composition

Lidocaine Hydrochloride (20 mg/mL)
Hydroxypropyl Methylcellulose
Sodium Hydroxide
Water for Injection

The jelly syringe contains no preservatives and is intended for single use only.

Packaging

JELIDO is available as a sterile, prefilled syringe made of polypropylene with a blue rubber stopper, a plunger rod and a blue rubber tip cap containing 6 or 11 mL of gel. The syringes are packed in thermoforming foil blister and further in boxes of 10 x6 mL/11 mL. The syringe tip does not support needle attachment.

Any JELIDO not used in a single application should be discarded.

PART III: CONSUMER INFORMATION

JELIDO™
(Lidocaine Hydrochloride jelly, USP)

This leaflet is part III of a three-part "Product Monograph" published when JELIDO was approved for sale in Canada and is designed specifically for Consumers. This leaflet is a summary and will not tell you everything about JELIDO. Contact your doctor or pharmacist if you have any questions about the drug.

ABOUT THIS MEDICATION

What is the medication used for:
JELIDO is used to produce a temporary loss of feeling or numbness of the skin in adults and in children 2 years of age and older, and can be used:

- before certain types of examinations done by your doctor;
- to help relieve the pain from inflammation of the urinary bladder and the urethra.

What it does:
JELIDO is the brand name for a topical anesthetic that contains the drug lidocaine. Topical anesthetics are used to produce a temporary loss of sensation or numbness on the area where they are applied.

JELIDO should start to work within 5 to 15 minutes after you apply it. The effect usually lasts 20 to 30 minutes.

What the medicinal ingredient is:
Lidocaine Hydrochloride 2%

What the nonmedicinal ingredients are:
Hydroxypropyl Methylcellulose, Purified Water and Sodium Hydroxide

Tell your doctor if you think you may be sensitive to any of the above ingredients.

What dosage forms it comes in:
JELIDO comes in a single-use syringe, in two package sizes – 6 mL and 11 mL.

WARNINGS AND PRECAUTIONS

Do not use JELIDO if you:

- are allergic to lidocaine, any other "-caine" type anesthetics, or any of the nonmedicinal ingredients in the product (see **What the nonmedicinal ingredients are**).

To help avoid side effects and ensure proper use, talk to your healthcare professional before you take JELIDO. Talk about any health conditions or problems you may have, including:

- all health problems you have now or have had in the past;
- other medicines you take, including ones you can buy without a prescription;
- if you are taking other medicines such as drugs used to treat irregular heart activity (antiarrhythmics);
- if you use JELIDO or any other medicines ending with "-caine";
- if there is an infection, skin rash, cut or wound at or near the area you want to apply JELIDO;
- if you have a skin condition that is severe or that covers a large area;
- if you have severe heart, kidney or liver disease;
- if you have epilepsy;
- if you are experiencing severe shock;
- if you are pregnant, plan to become pregnant or are breastfeeding.

INTERACTIONS WITH THIS MEDICATION

Tell your healthcare professional about all the medicines you take, including any drugs, vitamins, minerals, natural supplements or alternative medicines.

The following may interact with JELIDO:

- drugs you can buy without a prescription;
- antiarrhythmic drugs for heart problems (e.g., mexiletine, amiodarone);
- other anesthetics;
- propranolol for heart problems or cimetidine for gastrointestinal problems, if you are going to use high doses of JELIDO for a long time;
- fluvoxamine for depression, if you are going to use high doses of JELIDO for a long time.

Please inform your doctor/dentist/pharmacist if you are taking or have recently taken any other medicines, even those that can be bought without a prescription. Usage of such medicines at the same time may increase the risk of serious side effects**.**

PROPER USE OF THIS MEDICATION

The gel is available in two package sizes - 6 mL and 11 mL. Usually, the complete contents of the size suitable for the procedure will be used.

Adults: Do not use more JELIDO than the doctor has recommended. A usual adult dose is one 11 mL syringe, with possibly an additional syringe of 6 or 11 mL (for men) or one 6 mL syringe of 6 mL (for women). During procedures, the doctor may use as many as 4 syringes (a total of 40 mL) in one dose. Do not use more than 4 doses in a period of 24 hours.

Children: The dose depends on the child's weight. No more than 3 mL of jelly per 10 kilograms of the child's weight should be used per dose. For a 10 kg child the dose should be no more than one tenth of the tube. Do not use more than 4 doses in a period of 24 hours.

For self-catheterization: Follow these directions carefully. Clean the urethral area before using JELIDO. The syringe is removed from its sterile package by tearing off the backing paper. Before removing the blue cap from the end of the syringe, free the

plunger by gently pressing it. Remove the cap. Insert the nozzle into the opening of the urethra and press the plunger slowly to push out the gel.

The syringe is for single use only. If the complete contents are not used, the syringe and remaining gel must be thrown away.

This medicine has been prescribed for your current medical problem only. Do not give it to other people.

Overdose:
Avoid contact with your eyes or ears. Numbness in the eyes may prevent you from noticing if you get something in the eye.

For symptoms of serious side effects please consult the table entitled, "**Serious side effects and what to do about them.**"

In case of drug overdose, contact a healthcare practitioner, hospital emergency department or regional Poison Control Centre immediately, even if there are no symptoms.

SIDE EFFECTS AND WHAT TO DO ABOUT THEM

Like any medication, JELIDO may cause side effects in some people.

Avoid eating or chewing gum when JELIDO is used in the mouth or throat since numbness in these areas may interfere with swallowing and could potentially cause choking. Numbness of the tongue or gums may also increase the danger of injury due to biting.

Avoid exposure to extreme hot or cold temperatures (e.g., food, drink) until complete sensation has returned.

Avoid contact with the eyes, because numbness in the eyes may prevent you from noticing if you get something in your eye.

With the recommended doses, JELIDO has no effect on the ability to drive and use machines.

Medicines affect different people in different ways. Just because side effects have occurred in some patients does not mean that you will get them. If any side effects bother you, or if you experience any unusual effects while you are using JELIDO, stop using it and check with your doctor or pharmacist as soon as possible.

SERIOUS SIDE EFFECTS, HOW OFTEN THEY HAPPEN AND WHAT TO DO ABOUT THEM

Symptom / effect		Talk with your doctor or pharmacist		Stop taking drug and call your doctor or pharmacist
		Only if severe	In all cases	
Rare	**Allergic reaction such as:** redness, itching or swelling of your skin, hives, burning, stinging or any other skin problems, swelling of the neck area, or any difficulty with breathing not present before using this medicine	**X**		**X**
Very rare	**Overdose:** drowsiness, numbness of your tongue, light-headedness, ringing in your ears, blurred vision, vomiting, dizziness, unusually slow heartbeat, fainting, nervousness, unusual sweating, trembling, or seizures			**X**

This is not a complete list of side effects. For any unexpected effects while taking JELIDO contact your doctor or pharmacist

JELIDO can cause serious side effects if too much is applied. These include: drowsiness, numbness of your tongue, light-headedness, ringing in your ears, blurred vision, vomiting, dizziness, unusually slow heartbeat, fainting, nervousness, unusual sweating, trembling or seizures.

The above side effects are extremely rare but can occur when too much JELIDO is used at one time and when large amounts are used over a long period of time.

Consult your doctor immediately if any of these symptoms appear.

HOW TO STORE IT

Remember to **keep JELIDO well out of the reach of children** when you are not using it.

Keep JELIDO between 15°C and 30°C. Do not keep JELIDO in the bathroom medicine cabinet or other warm, moist places. Store in the original package.

Do not use JELIDO after the expiry date marked on the package.

Reporting Side Effects

You can report any suspected side effects associated with the use of health products to Health Canada by:

- Visiting the Web page on Adverse Reaction Reporting (https://www.canada.ca/en/health-canada/services/drugs-health-products/medeffectcanada/adverse-reaction-reporting.html) for information on how to report online, by mail or by fax; or
- Calling toll-free at 1-866-234-2345.

NOTE: Contact your health professional if you need information about how to manage your side effects. The Canada Vigilance Program does not provide medical advice.

MORE INFORMATION

This document plus the full prescribing information, prepared for healthcare professionals can be obtained by contacting the sponsor, PENDOPHARM, Division of Pharmascience Inc. at: http://www.pendopharm.com

By telephone: 1-888-550-6060
By post: PENDOPHARM, Division of Pharmascience Inc.
6111 Royalmount Avenue, Suite 100
Montreal, QC H4P 2T4

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