LIGNOCaine INJECTION

Product Information

Name of drug
Lignocaine Injection

Description
Lignocaine is a local anaesthetic agent and an amine. It is the 2-diethylamino-2'6'-dimethylacetanilide hydrochloride

Pharmacology
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Mechanism of action
Lignocaine acts by blocking sodium and potassium channels, which reduces the generation and conduction of the action potential. It also reduces the amount of calcium ions entering the cell, which decreases the strength of the muscle contraction. Lignocaine acts by blocking sodium and potassium channels, which reduces the generation and conduction of the action potential. It also reduces the amount of calcium ions entering the cell, which decreases the strength of the muscle contraction.

Absorption
Lignocaine is quickly absorbed after topical application, while injection into the subarachnoid space results in relatively slower absorption. Lignocaine is quickly absorbed after topical application, while injection into the subarachnoid space results in relatively slower absorption.

Distribution
Lignocaine distributes rapidly to most body tissues, with the exception of the cerebrospinal fluid. Lignocaine distributes rapidly to most body tissues, with the exception of the cerebrospinal fluid.

Metabolism
Lignocaine is metabolized by the liver, with the active metabolites being excreted in the urine. Lignocaine is metabolized by the liver, with the active metabolites being excreted in the urine.

Excretion
Lignocaine is excreted in the urine as inactive metabolites. Lignocaine is excreted in the urine as inactive metabolites.

Precautions
• Epidural or spinal anaesthesia in patients with serious diseases of the central nervous system or spinal cord such as meningitis, - serious diseases of the central nervous system or spinal cord such as meningitis, - serious diseases of the central nervous system or spinal cord such as meningitis.
• Patients with renal or hepatic impairment (see Dosage and Administration).

Adverse reactions
• Headache, dizziness, asthenia, nausea, tremor, hypesthesia, perioral paresthesia, diplopia, angioedema and urticaria have been reported.
• The incidence of adverse reactions is generally lower with regional anaesthesia compared to general anaesthesia.
• These effects may be minimized by using a small volume of lignocaine in the injection, with a slower injection rate.
• Lignocaine should be given cautiously to patients with epilepsy, hepatic disease, renal disease, or glaucoma.

Contraindications
• Local anaesthetics such as lignocaine should not be used in patients with known hypersensitivity to the drug.
• Patients with severe cardiovascular disease, severe respiratory disease, or severe liver disease should not be given lignocaine.
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Cautions
• Lignocaine should be used with care in patients with impaired renal or hepatic function, or those with a history of allergic reactions to local anaesthetics.
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Intravenous administration
• Intravenous lignocaine should be given cautiously to patients with impaired renal or hepatic function, or those with a history of allergic reactions to local anaesthetics.
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Dosage
• The dosage of lignocaine for intravenous administration should be adjusted according to the patient's age, weight, and body habitus.
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Pregnancy
• Lignocaine passes into the breast milk although it would be unlikely to cause harm to the breast-fed infant. The remote possibility of an idiosyncratic or allergic reaction in the breast-fed infant from lignocaine remains to be determined.
• Lignocaine crosses the placental barrier, but concentrations in umbilical cord blood are low.

Lactation
• Lignocaine passes into the breast milk although it would be unlikely to cause harm to the breast-fed infant. The remote possibility of an idiosyncratic or allergic reaction in the breast-fed infant from lignocaine remains to be determined.

Use in children
• The safety and efficacy of lignocaine in children have not been established. Lignocaine should be used with caution in children.

Use in the elderly
• The safety and efficacy of lignocaine in elderly patients have not been established. Lignocaine should be used with caution in elderly patients.

Use in labour
• Epidural lignocaine may be used during labour to provide analgesia. However, the use of lignocaine during labour is associated with a risk of adverse effects on the foetus.
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Use in specific conditions
• Lignocaine should be used cautiously in patients with reduced hepatic blood flow or function, and those on prolonged anticoagulant therapy.

Drug interactions
• Metabolism of intravenously administered lignocaine. It is possible that this effect will be additive when lignocaine is administered concomitantly with other drugs that have a similar effect on hepatic drug metabolism.

Drugs to avoid
• Lignocaine should be used with caution in patients with impaired renal or hepatic function, or those with a history of allergic reactions to local anaesthetics.

Other local anaesthetics
• Other local anaesthetics may be administered concomitantly with lignocaine, but the total dose of all local anaesthetics should not exceed the maximum recommended dose.

Not all product strengths or pack sizes are available in Malaysian market.
Adverse reactions

The normal recommended dose of lignocaine for various anaesthetic procedures in an adult is 2% (20 mg/mL) injectable lignocaine hydrochloride, a local anaesthetic. The dose should be individualised and blood levels should be monitored. For children, a reduced dosage based on body weight or surface area should be employed. Blood levels should be monitored.

Paediatrics:

A suggested paediatric dose is a loading dose of 0.5 to 1 mg/kg repeated if necessary up to 30 mg/kg, depending on the patient's response and the procedure being undertaken. The infusion should be terminated as soon as the patient's cardiac rhythm returns to normal. If a ventricular arrhythmia occurs, it should be managed by conventional means.

Respiratory effects:

Breathing patterns and respiratory rates may be abnormal following lignocaine administration. In the event of respiratory depression, assisted ventilation with oxygen should be employed. Breathing may be obstructed by local anaesthetic drugs. Post anaesthetic delirious breathing may occur from a confusional state. In the elderly this may be related to local anaesthetic techniques, with or without a contribution from the opioid used. When this occurs, it should be treated at once with a non-depolarising muscle relaxant.

Neurological effects:

Neurological effects of lignocaine are dose related and may occur after even small doses. In the event of neurological disturbances, the usual treatment is withdrawal of the drug. It may be advisable to give a short-acting barbiturate if necessary. During anaesthesia, the ECG may show changes suggesting myocardial functional depression, but this is not necessarily diagnostic of lignocaine toxicity. 

The excitatory manifestations may be very brief or may not occur at all, in which case the toxicity is usually evident because of the rate of onset of hypotension and other toxic symptoms. In such cases, the use of lignocaine should be discontinued.

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