Lidocaine for surface anaesthesia

Injection of local anaesthetic before surgery to remove an ingrowing toenail

Generic and proprietary names
- EMLA.
- Instillagel.
- Laryngojet.
- Lidocaine.
- Lidocaine and chlorhexidine.
- Lidocaine with phenylephrine.
- Lidocaine 5% ointment.
- Minims lignocaine and fluorescein.
- Minijet lignocaine.
- Perinal.
- Xylocaine.
- Xyloproct.
- Over-the-counter products containing lidocaine are available.

Classification
- Local anaesthetics.

Action
- Causes a reversible block to conduction along nerve fibres.

Indications
- A combined preparation of lidocaine and fluorescein is used for tonometry.
- Lidocaine, with or without adrenaline (epinephrine), is injected as local anaesthesia for minor surgical procedures.
- Lidocaine ointment is used before emptying the bowel to relieve anal fissure pain.
- Used in dental procedures.
- Gel products are used before urethral catheterisation.
- Used as a spray in bronchoscopy and bronchography.
- Topical products for application for the relief of local pain.

Contraindications
- Local anaesthetics should never be used for ocular symptoms.
- It is important not to inject into inflamed or infected tissues.
- Should not be applied to a traumatised urethra.
- Lidocaine with adrenaline should not be used for local anaesthesia in digits and appendages as it may produce ischaemic necrosis.

Cautions
- Care must be taken to avoid accidental intravascular injection.
- In patients with severe hypertension or unstable cardiac rhythm, use of adrenaline in an anaesthetic may be hazardous.
- Convulsions can occur in severe reactions.
- Hypersensitivity reactions.
- Toxic effects usually only result from excessively high plasma concentrations and single applications do not generally cause systemic side-effects.

Administration
- Injection.
- Eye drops.
- Cream.
- Gel.
- Spray.

Nursing considerations
- Only use ointments for short periods as they can be absorbed through the rectal mucosa.
- In estimating the safe dosage take account of the absorption and excretion rate as well as potency. Consider the patient’s age, weight, physique and clinical condition; the degree of vascularity of the area to which the drug is to be applied; and the duration of administration.
- Local anaesthetics do not rely on circulation to transport them to their sites of action. But uptake into the systemic circulation is still an important consideration. Monitor for toxic effects for the first 30 minutes after injection.
- In local anaesthesia, time should be given for the product to reach full effect, for example, in urethral catheterisation, apply into urethra at least five minutes before catheter insertion.

Patient teaching
- Ensure patients understand how they should use the product including duration of treatment and frequency of use.
- Advise mothers using products for sore nipples from breastfeeding to apply using gauze and wash off immediately before feed.
- Before introducing as local anaesthesia ensure patients are prepared for the injection and its associated stinging.

References