

Guideline

Use of LAT gel

Reason for development

- To standardise/improve patient care.

1 Scope

Children with wounds requiring suturing

2 Aim

This guideline is to help the clinician treating a child with a wound that requires suturing

Ingredients

Lidocaine 4%, Adrenaline 0.1%, Tetracaine 0.5% (LAT)

Background

- Skin lacerations requiring cleaning and suturing are commonly seen in children presenting to the ED. Neither of the standard topical anaesthetic agents [Emla® (lidocaine, prilocaine) and Ametop® (tetracaine)] can be applied to open wounds as they do not contain a vasoconstricting agent and so rapid absorption may result in systemic toxicity.
- The alternative of injection of local anaesthesia (e.g. lidocaine) has a major disadvantage of fear associated with injection among children who may require sedation before a procedure can take place. Also injection of local anaesthetic can lead to tissue distortion.
- LAT gel is a topical anaesthetic gel that can be applied to open wounds.
- LAT gel reduces the need to inject local anaesthetic/sedation when cleaning and suturing open wounds in paediatric patients.

Eligibility

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- Simple lacerations of the head, neck, limbs, or trunk
- Wounds less than 5cm in length

Contraindications

- Allergy to amide anaesthetics
- Gross contamination of wound
- Involvement of **mucous membranes, digits, genitalia, ear, or nose**

Adverse Events^{2,3,5}

- Local irritation may occur in some patients.
- Effect of local anaesthetic and vasoconstrictor reduce potential for systemic absorption and hence adverse effects.

Cautions for use

- Previous adverse effect
- Allergy to any of the product ingredients

Dosage and Application Procedure⁶

- LAT should be applied according to standard ED topical anaesthetic gel procedure;
- Application should be performed at initial nurse assessment or as soon after as is possible.
- Time of application should be documented on the initial assessment sheet.
- **Dosage is 0.5ml to 1.0ml per cm of wound length up to a maximum of:**
 - **2ml for those aged 1-3 years**
 - **3ml for those over 3 years**
 - **Maximum wound length: 5 cm**
- Place half of dose of LAT gel onto open wound and cover with occlusive dressing (e.g. sterile gauze) onto which the remaining half has been applied.
- Press firmly over the dressing for 30 minutes either with tape or the parent's gloved hand.
- After removing the gauze, test the effectiveness of the anaesthesia by touching with a sterile needle.
- Wound cleaning and suturing should be completed within 15 minutes of removal of the gel.
- Each bottle is for use on one patient only, and should be discarded within 24 hours of opening.

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References

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3. Schilling CG et.al. Tetracaine, epinephrine (adrenaline) and cocaine (TAC) versus Lidocaine, epinephrine (adrenaline), tetracaine (LET) for anesthesia of lacerations in children. Annals of Emergency Med. 1995; 25(2): 203-8
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6. Resch K, Schilling C, Borchert BD, et al. Topical Anesthesia for Pediatric Lacerations: A Randomized Trial of Lidocaine-Epinephrine-Tetracaine Solution Versus Gel. Annals of Emergency Medicine. 1998; 32, 693-697

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