LACERAINE® TOPICAL WOUND ANAESTHETIC: APPLICATION - ED

PROCEDURE ©

DOCUMENT SUMMARY/KEY POINTS

- Laceraine® wound anaesthetic is indicated for **topical** application to superficial wounds and lacerations to provide localised surface anaesthesia and reduce bleeding.
- A focused history and wound assessment must be performed prior to prescribing by accredited Registered Nurses (RN), Medical Officers or Nurse Practitioners.
- Laceraine® may be prescribed under a Standing Order as a single dose by accredited RN's
- Laceraine® may be applied by Medical Officers and ED Registered Nurses who have been trained in the application technique.
- Laceraine Gel is applied directly to the wound surface and retained with an occlusive dressing.

CHANGE SUMMARY

- Updated prescribing information and reduced dosing limits for Gel formulation.
- Use of Laceraine® soaked cotton wool is not required when using the Gel formulation.
- **12/04/21:** Minor review. References to Laceraine solution deleted as solution formulation is no longer available. Revised application technique. References to application of soaked cotton wool removed. Packaging and storage amended: refrigeration not required.
- **30/04/21:** Minor review. Strength amended to correspond to the manufacturer's product information, see pg 3.

Approved by:	SCHN Policy, Procedure and Guideline Committee	
Date Effective:	1st January 2021	**Review Period**: 3 years
Team Leader:	Nurse Practitioner	**Area/Dept**: Emergency Department SCH

Date of Publishing: 30 April 2021 8:48 AM Date of Printing: 30 April 2021

READ ACKNOWLEDGEMENT

Training

- Laceraine® may be applied by ED Registered Nurses who have been trained in the application technique under a Standing Order.

Acknowledgement

- All SCHN Emergency Department clinical staff medical and nursing must be cognisant of the content of this document

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1 Purpose/Scope

This document provides guidelines for the prescription and application of Laceraine® gel topical anaesthetic for the management of minor wounds in the Emergency Department (ED)

2 Responsibilities

Management is responsible for ensuring that registered nurses (RN) and medical officers who undertake this practice are provided with appropriate knowledge and training.

3 Product Information

Laceraine® is a sterile anaesthetic product for topical application to superficial wounds and lacerations to provide local anaesthesia.

Composition

Laceraine® is a mixture of:

Lidocaine (Lignocaine) hydrochloride 4.2% w/v (42.4 mg/mL)

Tetracaine (Amethocaine) hydrochloride 0.5% w/v (5 mg/mL)

Adrenaline (Epinephrine) 0.2% w/v (1.8 mg/mL) [1, 9]

Availability

Laceraine gel: 4mL glass vial, light protected (green cap) – NOT refrigerated

Laceraine gel topical wound anaesthetic contains no antimicrobial preservative. Use in one patient on one occasion only and discard any unused product. Do not use if gel is discoloured. If the plastic cap is lifted or removed the product should not be used.

Action

The local anaesthetic agents decrease sensory nerve impulse transmission. Adrenaline increases the duration of local anaesthetic action and decreases systemic absorption of the anaesthetics. In addition, adrenaline reduces the amount of blood in the wound field which may facilitate wound inspection and closure.

Efficacy

When applied to the wound as recommended, Laceraine® provides an effective level of local anaesthesia in the majority of patients. Duration of anaesthesia is 45 to 60 minutes following removal.

Absorption of Laceraine® from wound surfaces is low. In cases where topical anaesthesia alone is sub-optimal, lignocaine 1% -/+ adrenaline may be infiltrated prior to wound closure. The maximum additional lidocaine dose is 1 mg/kg = 0.1 mL/kg of 1% lignocaine with the total lidocaine dose not exceeding 5 mg/kg. Laceraine® must not be injected nor should it be applied following direct infiltration of Lidocaine +/- adrenaline.

4 Indications

Laceraine® is suitable for superficial lacerations and wounds that are likely to require closure with skin glue or sutures in the Emergency Department. It may also facilitate thorough cleaning, irrigation and debridement of painful minor wounds.

5 Contraindications and Precautions

Contraindications [1]

- Allergy or hypersensitivity to any components
- Use in children < 1 year of age is not recommended
- Wounds with end arteriolar supply due to vasoconstriction and risk of ischaemia: includes digits, ear pinnae, tip of the nose and penis
- Wounds greater than 5cm in length
- Wounds involving deep structures such as bone, cartilage, tendon, nerve or major vessels
- Contaminated wounds or human/animal bites, or deep punctures
- Wounds of mucous membranes, eyes, dental/oral injuries
- Not for use on intact skin or mucous membranes
- Burns
- Prior infiltration with local anaesthetic agent
- Trivial wounds unlikely to require repair
- Patients on monoamine oxidase inhibitors (MAOI's) within the last 14 days, digoxin, quinidine or propranolol

Precautions

- Wounds adjacent to mucous membranes or eyes: protective precautions should be used to avoid leakage or rubbing into the eyes or mouth.
- Flap lacerations where vasoconstriction is likely to cause tissue ischaemia.
- Patients with epilepsy, asthma, circulatory failure, hepatic or renal dysfunction, cardiovascular disorders, circulatory failure/hypovolaemia or shock, diabetes mellitus/peripheral vascular disease.
- If any adverse or systemic events are identified then the Laceraine® occlusive dressing should be immediately removed, the wound irrigated and urgent clinical review obtained.

6 Patient Assessment

Prior to the application of Laceraine® a focused patient and wound assessment should be undertaken by either the Clinical Initiatives Nurse, in conjunction with the triage assessment, or by the prescriber/treating clinician. The assessment should include:-

- Primary survey
- Time and mechanism of injury (NAI assessment) and first aid measures
- Location of the wound
- Wound description such as length, width, depth if known, shape, tissue flap
- Possible involvement of deep structures (motor function, sensation, neurovascular)
- Possible foreign bodies or contaminants
- Allergies
- Previous medical history and medications
- Immunisation status
- Pain score and analgesia used prior to arrival or initiated at triage
- Weight
- Fasting time: keep nil by mouth

7 Dose Calculations

Gel: **0.1mL/kg to a maximum of 2mL for children aged 1 to 3 years**

0.1 mL/kg to a maximum of 3mL for age 3 years to adult

Recommended doses should not be exceeded. The smallest effective dose should be applied and the volume documented in the Medication Administration Record (MAR) utilising the Electronic Medication Management (eMM) system.

Wounds should not require volumes greater than the dose limits for lacerations less than 5cm in length OR 1 mL for each cm of laceration, whichever is the lesser volume. Laceraine® should have direct wound contact for a minimum of 20 minutes and a maximum of 60 minutes.

The Laceraine® dressing and residual product is to be removed after 60 minutes to avoid excess absorption. Laceraine® application under a Standing Order by RN's is limited to a single prescription order. Additionally, no more than 4 doses in 24 hours should be prescribed or applied.[11]

8 Side Effects

The parent/carer (and patient where relevant) should agree to the proposed application and be informed of the expected response. Laceraine® may sting briefly on initial application.
The affected body part should be positioned and supported to ensure minimal movement during application.
Care should be taken to avoid product leakage or transfer from the site of application to the child's eyes, mouth or any other mucous membranes.
Laceraine® usually causes temporary blanching of local surrounding tissue indicative of effective absorption. This resolves over the ensuing hour as the medication wears off.

9 Administration

1. The dose must be prescribed by a Medical Officer, Nurse Practitioner or Accredited Registered Nurse as per SCHN Safe Prescribing Practice Guideline 2017 on the medication administration record (MAR).
2. The RN administering the Laceraine® draws up the prescribed dose of Laceraine® after removing the cap, metal collar and bung from the vial. Discard the unused portion. This product is for **topical use only**.
3. Gently clean the wound of surface blood, clot or debris. This facilitates effective wound contact of the Laceraine® with the wound surface and margins. Thorough cleaning and irrigation can be undertaken after the wound has been anaesthetised.
4. Apply Laceraine® gel directly to the wound ensuring full coverage. Use of a cotton tip applicator may facilitate spread/coverage. Avoid excess volume which may cause run-off or leakage.
5. Apply an occlusive clear film dressing (e.g. AsGuard ®, Tegaderm ®, Opsite ®). No cotton wool/gauze is required under the occlusive dressing. Application of barrier film (Cavilon®, Skin Prep®) to surrounding intact skin may aid dressing retention and removal.
6. Document the actual volume applied to the wound when signing the MAR.
7. Leave the occlusive dressing in place for a minimum of 20 minutes to a maximum of 60 minutes. Remove after 60 minutes.
8. Evaluate the therapeutic anaesthetic and analgesic and response.
9. Clean and/or irrigate the wound ensuring all Laceraine® is removed.
10. Complete the wound inspection and repair as appropriate.
11. Document the procedure.

10 Related Documents

- Safe Prescribing Guideline SCHN 2017
- Hand Hygiene
- Laceration Management in the Emergency Department
- NSW Health, Safety Notice, 2020: The Risk of Toxicity from Topical Anaesthetic Products https://www.health.nsw.gov.au/sabs/Documents/2020-si-003.pdf
- Standing Order SCH http://webapps.schn.health.nsw.gov.au/epolicy/policy/5408

11 References/resources

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