

Drug Prescribing Guideline



John Hunter
Children's Hospital
CHILDREN, YOUNG PEOPLE AND FAMILIES



Health
Hunter New England
Local Health District

LMX4 Topical Anaesthetic for Children >1 Month

Title	LMX4 Topical Anaesthetic (containing lidocaine (lignocaine) 4% w/w with benzyl alcohol 1.5% preservative)
Areas where Guideline applicable e.g. ITU, Haematology, Ward	All Clinical Wards JHCH – excluding NICU; JHH – Emergency Department, ICU, Imaging, Theatres/Recovery, Pathology
Areas where Guideline not applicable	NICU
Keywords	Paediatrics, anaesthetic, care, children, local, skin breaching, topical
Authorised Prescribers:	Only the initial dose can be applied as a nurse-initiated medication (NIM); a medical officer must prescribe subsequent applications
Indication for use	To provide local anaesthesia before minor skin breaching procedures e.g. IV cannulation and venepuncture/lumbar puncture.
Clinical condition	Children who are having painful, skin breaching procedures including: <ul style="list-style-type: none"> • Aged >1 month • Short duration of procedure • Targeted area for procedure
Contraindications	Children less than 1 month of age Known hypersensitivity to amide-type local anaesthetics
Precautions	Do not apply to broken skin, eyes, ears, inflamed areas or mucous membranes. Severe lidocaine (lignocaine) toxicity has been reported. Factors contributing to high systemic absorption include: <ul style="list-style-type: none"> • Use of excessive quantities • Application to broken skin or mucosa • Extended duration of use • Short intervals between doses • Application to large areas of the body The cream should appear white to off-white or yellowish and opalescent. If not, do not use and contact Pharmacy. Use with caution in patients with heart block or severe shock
Proposed Place in Therapy	Should be used in conjunction with other methods to manage procedural pain – See JHCH 1.8 Paediatric Procedural Care
Dosage	Apply a small amount of cream and gently massage it into the skin. Then apply a thick layer of cream (approximately 1.0–2.5 grams) directly to occlusive dressing or apply via spatula/slab. For general use, no more than TWO sites should be chosen For botulinum toxin injections in paediatric rehabilitation patients, multiple sites may be used, but maximum doses are to be strictly adhered to.

	<p>Maximum doses:</p> <ul style="list-style-type: none"> - Children 1–3 months: max 1 g and 10 cm²; - Children 3–12 months: max 2 g and 20 cm²; - Children 1–6 years: max 10 g and 100 cm² for 1–2 hours; - Children 6–12 years: max 20 g and 200 cm² for 1–2 hours.
Duration of therapy	<p>Leave in place for 30–60 minutes.</p> <p>Anaesthesia persists for up to 5 hours after cream is removed</p>
Administration instructions	<p>Wash/wipe prospective sites with mild soap and water. Do not use alcohol or acetone prior to application (includes alcohol hand gels)</p> <p>Select ONE or TWO sites over a visible vein (e.g. back of hand, cubital fossa).</p> <p>Site of application should be intact, healthy skin.</p> <p>Do not apply from tube directly to skin.</p> <p>Cover firmly with an occlusive dressing. Peel off the backing paper. Record the time of application and time for removal on back of the occlusive dressing.</p> <p>After suitable time has elapsed, remove dressing and wipe off cream with gauze swab. The procedure should be initiated approximately 5 minutes after the cream has been removed.</p> <p>LMX tubes are for single-patient use.</p>
Starting/Monitoring requirements	<p>Teams using LMX4 regularly are asked to keep data on skin reactions and duration of applied cream.</p> <p>Store at room temperature.</p>
Safety	<p>The skin should be prepared as per standard for that procedure (e.g. alcohol swab if required).</p> <p>Severe lidocaine (lignocaine) toxicity symptoms include: Dizziness, confusion, loss of consciousness, hypotension, bradycardia and cardiac arrest. Escalate any concerns according to CERS.</p> <p>The risk of lidocaine (lignocaine) toxicity increases with total dose and longer application times.</p>
Effectiveness (state objective criteria)	<p>Skin anaesthesia allowing procedure with minimal pain</p>
Management of complications	<p>Localised transient erythema, irritation, oedema and itch may occur.</p> <p>Rarely, more severe erythema, oedema, itching or blistering occur and should be treated by removing the cream immediately.</p> <p>Severe lidocaine (lignocaine) toxicity symptoms include: Dizziness, confusion, loss of consciousness, hypotension, bradycardia and cardiac arrest. Escalate any concerns according to CERS.</p> <p>Report any unexpected effects to Pharmacy</p>
Important Drug Interactions	
Basis of Guideline: (including sources of evidence, references)	<ul style="list-style-type: none"> • MIMS Online accessed via CIAP 14/3/19 • Australian Medicines Handbook accessed via CIAP 14/3/19 • NSW Health Safety Information 003/14 • EMLA product information (PI) allows for higher doses than the LMX4 PI. Advice from the Hunter Drug Information Service and Clinical Pharmacology is that patients would not be

	placed at increased risk by the use of LMX-4 at the recommended doses of EMLA. This increased dose has been approved by JHH Quality Use of Medicines Committee, October 2015
Groups consulted in development of this guideline	Pharmacy, CYPFS QUMC, JHCH CQ&PCC & JHH QUM

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