

Lidocaine

Lidocaine, xylocaine, or lignocaine (AAN, former BAN) is a common local anesthetic and class-1b antiarrhythmic drug. Lidocaine is used topically to relieve itching, burning, and pain from skin inflammations, injected as a dental anesthetic, or used as a local anesthetic for minor surgery.

It is on the WHO Model List of Essential Medicines, the most important medications needed in a basic healthcare system.

Indications

Given IV, suppresses laryngeal reflexes which may help blunt ICP elevations that normally follow endotracheal intubation or suctioning. IV lidocaine used to treat cardiac arrhythmias may cause seizures ¹⁾.

Anticonvulsant at low doses, may provoke seizures at high concentrations

For post-herpetic neuralgia it is suggested to initiate therapy with lidocaine skin patches since this modality has the lowest potential for serious side effects.

Experimental intervention for generalized convulsive status epilepticus

2 patients with recurrent and profound [bradycardia](#) due to [Trigemino-cardiac reflex](#) during endovascular [Onyx™ embolization](#) for a [dural arteriovenous fistula](#). Prophylactic intra-arterial injection of [lidocaine](#) (10-20 mg) effectively and safely blocked the recurrence and potential occurrence of TCR. These 2 patients had reduced heart rate with either [hypotension](#) or [hypertension](#) during their TCR episodes, suggesting that stimulating a distinct cerebral artery ([occipital artery](#) versus [vertebral artery](#) branch) can initiate TCR by provoking the [vagus nerve](#) via the common neuronal pathway while simultaneously inhibiting or exciting the sympathetic pathway. Intra-arterial injection of lidocaine during endovascular procedures can be recommended as an effective prophylactic approach for use in the treatment of the cerebrovascular disorder where there is high risk of embolization-induced TCR ²⁾.

Viderman et al., reported intravenous lidocaine in the management of severe brain tumor-associated headache ³⁾.

Lidocaine patch (Lidoderm®)

May be effective. ⁴⁾ Rx: apply patch for up to 12 hrs/day up to a maximum of 3 patches at a time to the intact skin over the most painful area (may trim patch to appropriate size). Supplied: 5% lidocaine

¹⁾

Acute Reactions to Drugs of Abuse. Med Letter. 1996; 38:43-46

²⁾

Sun Z, Lu H, Hu Y. Prophylactic Intra-Arterial Injection of Lidocaine Prevents Trigemino-cardiac Reflex During Endovascular Embolization for Dural Arteriovenous Fistula: A Report of 2 Cases. Am J Case Rep. 2021 Jun 2;22:e930837. doi: 10.12659/AJCR.930837. PMID: 34077403.

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Viderman D, Nurpeissova A, Bilotta F. Intravenous lidocaine in the management of severe brain tumor-associated headache. J Clin Anesth. 2018 Dec 28;55:67-68. doi: 10.1016/j.jclinane.2018.12.053. [Epub ahead of print] PubMed PMID: 30597454.

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Dworkin RH, Backonja M, Rowbotham MC, et al. Advances in neuropathic pain: diagnosis, mechanisms, and treatment recommendations. Arch Neurol. 2003; 60:1524-1534

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