

Lidocaine gel for analgesia and patient comfort

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ABSTRACT

Lidocaine is the most often used local anaesthetic for local infiltration. It is generally considered to be safe and effective. It's used to give local anaesthetic before laceration repair or other painful operations like

lumbar puncture. The pain associated with injection with lidocaine as a local anaesthetic is a disadvantage. A number of methods for minimising injection pain have been investigated. Lidocaine buffering to a neutral pH is thought to be useful in minimising injection pain. Lidocaine's anaesthetic potency is unaffected by buffering, and the resultant solution is stable.

Key Words: *ultrasonography; anaesthetic care; noninferiority*

COMMENTARY

Anesthetic treatments for upper limb surgery include interscalene and axillary brachial plexus blocks. While ultrasonography has improved the quality and safety of these peripheral nerve blocks, needle insertion and manipulation can cause significant discomfort, which can impair patient compliance and raise anxiety, dread, and dissatisfaction with anaesthetic care. Prior to the nerve block, some practitioners infuse the skin with 2% lidocaine to reduce pain. This, however, entails additional needle insertions and injections, which can cause patient discomfort and raise the risk of intraneural or intravascular damage [1,2].

For ultrasound-guided nerve blocks, gel is employed as an acoustic coupling medium. Although a non-medicated water-based gel is the most popular option, a water-based lidocaine 2% gel is also popular, and its cost is comparable to the non-medicated gel. When administered topically, lidocaine gel can help with needle insertion and injection pain, as well as saving time because the gel base can act as an acoustic coupling medium for ultrasound imaging [3]. As a result, the use of lidocaine gel would reduce the need for multiple injections to infiltrate local anaesthetic into the tissues, as well as the time spent applying extra sterile gel for ultrasonic conduction [4].

Noninferiority trials are frequently used to uncover innovative medicines that have similar efficacy to the standard treatment while also providing benefits that the standard treatment may not [5]. Using lidocaine gel, for example, removes the need for additional injections, which increases the risk of tissue and nerve injury, hematoma, and/or patient discomfort. Furthermore, lidocaine gel can be employed as an acoustic coupling medium, eliminating the requirement for sterile gel, which is commonly used during ultrasound imaging. The patient's age and emotional condition are both known to influence the amount of pain response. The extent of the pain response may have been reduced by utilising volunteers who were not harmed and were experienced with intrusive procedures. Differences in injection discomfort would be harder to discern as a result. The low absolute magnitude of the pain scores recorded may represent some of these characteristics, while comparing absolute differences in pain scores between participants may be methodologically inaccurate [6].

Lidocaine 2% gel did not provide inferior analgesia to lidocaine 2% infiltration for needle insertion or injection pain during interscalene or axillary brachial plexus blocks under the parameters of our investigation. When compared to earlier research with different topical medications, Lidocaine gel may be more effective when used for a longer period before block performance. Lidocaine 2% gel is noninferior to lidocaine 2% infiltration for analgesia during interscalene and axillary brachial plexus blocks, and it eliminates the need for additional injections.

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