



## Trigeminal autonomic cephalalgias and intranasal lidocaine: a symptomatic management option

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### Introduction

Trigeminal autonomic cephalalgias (TAC) are excruciating headaches with limited treatment options. In addition to drug therapy, there are some studies regarding nerve blocking and nerve stimulation with acceptable results. We had a sequence of three difficult to treat patients because of the disease or some associated condition that made us try something not so usual. Lidocaine, by blocking voltage-gated Na<sup>+</sup> channels can reduce the excitability of neurons and thus prevent or reduce the sensation of pain, which can relieve neuropathic pain, hyperalgesia, and complex regional pain syndrome.

### Objective

Observe if intranasal lidocaine could be effective and safe for patients with TAC.

### Methods and Results

The three patients signed a consent permission form. (1) 29-year-old pregnant woman with a history of headaches for about 3 years. Pain was localized in the right periorbital region with the severity of about 7 out of 10. Attacks of excruciating pain associated with ipsilateral tearing 5–8 times a day - Paroxysmic Hemicrania. She was diagnosed with prolactinoma two years ago. The management of the tumor had resolved the pain. With the pregnancy, bromocriptine has been stopped. So, 1 month later, the pain returned. As indomethacin could not be used in this situation, we opted to prescribe intranasal lidocaine. After the first dose, the patient had control of the pain. It was prescribed 2% lidocaine, 2 mL intranasal (IN) until four times a day. (2) 56-year-old man with a history of headaches for about 4 months. Pain was localized in the right periorbital region with the severity of about 10 out of 10. Attacks of excruciating pain associated with ipsilateral tearing and conjunctival injection lasting for 30-90 seconds and occurring as single stabs 30-50 times a day - short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing (SUNCT). It was prescribed lamotrigine, he received a nerve block and, as he had no response to sumatriptan SC, we prescribed intranasal lidocaine (the same dosis), which brought a control of the attacks. (3) 38-year-old man with a history of headaches for about 12 months. Pain was localized in the left periorbital region with the severity of about 10 out of 10. Attacks of excruciating pain associated with ipsilateral tearing and conjunctival injection lasting for 5-120 seconds and occurring as single stabs 50-90 times a day - Short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing (SUNCT). It was previously prescribed verapamil, topiramate, duloxetine, without any improvement. We started lamotrigine, he received a nerve block with lidocaine plus dexamethasone and, as he had no response to indomethacin, sumatriptan SC, we prescribed intranasal lidocaine (the same dosis), which brought complete control of the attacks.

### Conclusion

For our three patients intranasal 2% lidocaine, 2 mL, was an effective, short cost, and safe option of abortive treatment for two TAC pain: Paroxysmic Hemicrania and SUNCT.

**Keywords:** Trigeminal autonomic cephalalgias, Lidocaine, Pregnancy, Safety, Cost-effective.