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Case report

Short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing (SUNCT) responsive to intranasal lidocaine and nerve blockage: a case report

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Abstract

Background: Trigeminal autonomic cephalalgias comprehend a myriad of headaches with different symptoms, with comprehend short-lasting unilateral neuralgiform headache attacks with cranial autonomic symptoms (SUNA) or with conjunctival injection and tearing (SUNCT). Current treatment options are limited, and they are based mostly on case reports and small studies.

Case Report: We report here the case of a 75 years old man suffering from acute trigeminal autonomic headache with a satisfying response to intranasal lidocaine and nerve blockage.

Conclusion: Intranasal lidocaine and nerve blockage may represent a useful and cost-effective treatment for patients with SUNCT/SUNA.

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Introduction

Trigeminal autonomic cephalalgias comprehend a myriad of headaches with different symptoms. Short-lasting unilateral neuralgiform headache attacks with cranial autonomic symptoms (SUNA) or with conjunctival injection and tearing (SUNCT) are rare entities, though severely debilitating.[1] Current treatment options are limited, and they are based mostly on case reports and small studies. Intravenous lidocaine has been consistently described as the treatment of choice for acute episodes though it presents important cardiac and neuropsychiatric risks to patients.[2] Older adults are particularly vulnerable to drug-related adverse effects, thus needing an alternate choice. Herein, we describe an elderly patient with SUNCT treated with intranasal drip of lidocaine and multiple nerve blockades with marked improvement of pain.

Case Report

A 75 year-old male patient with a past medical history of diabetes, bipolar disorder, asthma, hypothyroidism and colorectal cancer staging II treated with colectomy 2 years before was admitted to the emergency department due a refractory daily headache that had initiated two months earlier. His headache was exclusively right-sided and mostly perceived in the V1 (ophthalmic) division of the trigeminal nerve; the pain was of great intensity, described as if he was being stabbed, with a maximal duration of 10 seconds. During pain attacks, he often experienced ipsilateral symptoms of conjunctival injection, lacrimation and ptosis. He had allodynia in the affected area between the episodes and there were no aura preceding the episodes. In addition, the pain was unresponsive to acetaminophen, non-steroidal inflammatory drugs, or verapamil, which had been in use for the last month. He came to the emergency department because the frequency of headache attacks had increased in the past few days, occurring every 10 minutes, which imposed great suffering. His physical and neurological examination were unremarkable except for the reproduction of the headache's episodes when the right V1 region was light touched.

A diagnosis of a trigeminal cephalalgia was made and the patient was treated with high flow oxygen but had no response, which prompted an alternative diagnosis such as SUNCT. Due to the patient's advanced age and limited disposal of cardiac monitorization, a decision was made to treat the patient with intranasal lidocaine without vasoconstrictor. Because of limited material, intranasal lidocaine drip was performed with the patient lying down, with hyperextension of the neck and turning lightly his head towards the side of the pain. A syringe of 5 mL of 2% lidocaine was dripped inside his right nose during 10 seconds, following 6 hours without food ingestion to avoid aspiration. After this intervention, the patient experienced great pain relief, presenting only 1 episode of pain in the following 24 hours, which was of mild intensity. In that moment, a 3-ml syringe containing lidocaine 2% was prepared and the patient was given unilateral greater occipital nerve, lesser occipital nerve, trochlear nerve and supraorbital nerve block with respectively 1.5, 1, 0,5 and 0,5 ml of lidocaine. Also, a preventive treatment regimen with lamotrigine was initiated (25 mg once a day, slowly titrating every 4 days).

After an investigation of secondary causes of the headache with normal magnetic resonance of the brain, the patient was discharged home with the instruction to use intranasal lidocaine using a syringe once per day if he was experiencing recurrent pain episodes. During 14-day follow-up evaluation he reported only one episode of mild headache, with spontaneous remission, and none side effects associated with the treatment. He was satisfied with the treatment. At a 6-month follow-up evaluation, the patient was asymptomatic and he referred complete remission of symptoms.

Discussion

We presented a patient with a clinical diagnosis of SUNCT with a very satisfactory response of headache after treatment with simple and relatively safe procedures of delivering intranasal lidocaine through a slow dripping using a syringe and multiple nerve blockades in the affected area within 14 days of follow-up.

The most effective treatment of acute management of SUNA and SUNCT exacerbations is the use of intravenous lidocaine, with reported effect lasting from 2 to 10 days; however, severe consequences associated with this treatment such as cardiac arrhythmias and neuropsychiatric symptoms have been commonly reported. Intravenous glucocorticoids are a less effective but safer option than intravenous lidocaine but also have significant side effects.[2] Older adults with SUNCT/SUNA may be especially at risk for these adverse effects and therefore they may benefit from alternate, less harming and secure options of treatment such as intranasal drug drip and nerve blockades in the area corresponding to the pain.

Intranasal administration of lidocaine with the technique

described herein and nerve blockade are inexpensive, relatively low-risk and requiring only short term training besides were hereby reported to be effective treatments of SUNCT. Similar treatments have been previously reported both for SUNCT and SUNA with satisfactory results[3,4] but data on this topic is still scarce in the literature, with no known reports of trials with patients with this condition associating both treatments. Potential advantages of intranasal over intravenous lidocaine are: 1) widespread availability and inexpensive material needed for the application; 2) avoidance of a critical care bed, which decreases immensely the financial burden of treatment; and 3) potential fewer systemic side effects.[2]

Although potentially safe, a few recommendations are necessary to avoid side effects of intranasal lidocaine. As lidocaine may anesthetize other nerves, dysphagia may be a potential consequence. We recommend patients to restrict ingestion of solid and liquids for 6 hours after the administration. Although minimal, muco-cutaneous absorption of the drug is yet a concern that must be accounted for. Symptoms such as bad taste and nasal burning may be present, though with minimal systemic consequences. Further studies, such as randomized controlled trials are mandatory in order to corroborate the findings of this case report.

Conclusion

Intranasal lidocaine associated with trochlear, supra-orbital, major and minor occipital nerve blocks presented efficient acute pain control within a follow-up of two weeks in a patient with SUNCT. These treatment options are easy, secure, have feasible techniques, and may represent a useful and cost-effective treatment for patients with SUNCT/SUNA.

Consent

The patient gave his consent for the writing of this case report.

Declaration of conflicting interests

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Authors' contribution

All authors wrote, read, and approved the final manuscript.

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