▪ Headache Medicine 2023, Supplement ▪ p-ISSN 2178-7468, e-ISSN 2763-6178

Headache Medicine

# Peripheral nerve block in a migraine pregnant patient: a case report

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**Categoria**: Tratamento Preventivo Da Enxaqueca

**Introduction**
Migraine is one of the most common neurological complaints during pregnancy. Many women with a history of migraine experience an improvement during pregnancy (especially those with menstrual migraine), while those with migraines with aura are more likely to have an unpredictable course of pain during gestation. It is crucial to manage migraine during pregnancy because prolonged vomiting or nutritional problems can have deleterious effects on both maternal and fetal health. The decision to use medication during pregnancy involves a discussion of the risk-benefit ratio. Pregnant women with headache can be treated during pregnancy and the postpartum period with peripheral nerve blocks, reducing the need to initiate or increase prophylactic medication doses. The frequency of the blocks can be adapted based on the patient's response. Moreover, the blocks have proven effective in relieving moderate to significant pain for some individuals suffering from migraine. One case series that examined 13 pregnant women who received blocks for episodic migraine or chronic migraine showed efficacy for both status migrainosus and short-term prophylaxis.

**Objective**
To report a case of a pregnant patient from the outpatient clinic of the General Hospital of Fortaleza, with a significant worsening of migraines during pregnancy, who showed significant improvement after the second peripheral nerve block.

**Case Report**
A 31-years-old patient, female, with a headache for the past 8 years, affecting the bilateral frontal region of the head, with moderate to severe intensity, pulsatile, radiating to the cervical region, accompanied by photophobia, phonophobia, nausea, and vomiting, without aura, diagnosed as migraine. She was in treatment with desvenlafaxine 100 mg/day and propranolol 40 mg/day, experiencing an average of 3 episodes per month. However, the patient discontinued desvenlafaxine when she discovered she was pregnant, leading to a worsening of her headache attacks in the subsequent weeks, during which she also experienced hyperemesis gravidarum. In the June 2023, at 15 weeks of gestation, it was decided to perform peripheral nerve blocks with lidocaine, targeting the major and minor occipital nerves, supraorbital nerves, auriculotemporal nerves, and trapezius muscles, without complications, and to increase propranolol to 80 mg/day. Upon returning in July 2023, at 19 weeks of gestation, the patient reported daily severe headache attacks, worsened when lying down, with associated vertigo. Neurological examination revealed no pathological findings except for trigger points on palpation of the major and minor occipital nerves bilaterally. The fundoscopic examination was normal. Due to the progressive worsening of headaches during pregnancy and the patient's report of worsened pain while lying down, secondary headache was suspected, leading to head MRI, which showed no abnormalities, and intracranial MRA, which did not suggest secondary causes. It was again decided to perform peripheral nerve blocks in the same locations using lidocaine, with monthly follow-up. Upon reevaluation in August 2023, at 23 weeks of gestation, the patient already showed significant improvement, with only two headache episodes per week and a considerable improvement in quality of life.

**Conclusion**
The reported case highlights the therapeutic discussion regarding the use of peripheral nerve blocks for migraines in pregnant patients and the need for investigation in cases with other red flags. The patient reported did not show improvement neither after adjusting prophylaxis nor with the first peripheral nerve block; however, substantial headache improvement occurred after the second application, emphasizing the importance of peripheral nerve blocks as an ally to avoid initiating or increasing prophylactic medication doses in pregnant women with migraines.

**Keywords**: Peripheral Nerve Block;Migraine;Pregnancy.