Headache Medicine 2024, Supplement p-ISSN 2178-7468, e-ISSN 2763-6178

Headache Medicine

DOI: 10.48208/HeadacheMed.2024.Supplement.142

Bilateral sphenopalatine and bioccipital block as a method for reversing chronic migraine: a case of refractory headache following meningeal cryptococcosis

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Introduction
Peripheral nerve blocks showed success in treating cervicogenic headache, occipital neuralgia, cluster headache, and migraine. This procedure is notable for its effectiveness in acute pain relief and its cost-effectiveness.

Objective
To present a case of peripheral nerve block in a chronic headache refractory to analgesics scenario, exacerbated by a cryptococcal meningitis.

Case Report
INS, a 58-year-old female, presented with sporadic-onset refractory headaches, chronicle and worsened after developing cryptococcal meningitis post-liver transplant 5 years ago. The pain was bilateral, bitemporal, retro-orbital, symmetrical, oppressive, and gradual, peaking within 1 hour. Without analgesics, the pain was continuous, severe, auraless, associated with nausea, vomiting, photophobia, and allodynia. She used 4-6 tablets of 500 mg dipyrone daily. She had late cutaneous porphyria, history of treated breast cancer, cirrhosis secondary to non-alcoholic steatohepatitis and hemosiderosis, treated by transplant, with neurocryptococcosis transmitted from the donor, followed by cytomegalovirus encephalitis and empyema pneumonia. She had immunosuppressive therapy, also use of amitriptyline (25 mg, twice daily), topiramate (50 mg, twice daily), and dipyrone. MRI during meningitis revealed leptomeningeal and ependymal lesions, progressing over 1 year to a right frontal white matter's lesion, possibly due to immune reconstitution inflammatory syndrome.
To alleviate the pain, bilateral blockade of the greater and lesser occipital nerves and sphenopalatine ganglion was performed, administering 2 mL of 0.2% ropivacaine and 50 mcg clonidine per nerve, and 12 mL of the solution via intranasal gauze to the ganglia, volumes selected by safety parameters. The patient reported a 90% reduction in pain intensity and frequency after 4 sessions, reducing the analgesics' necessity. However, during the 5th session, vertigo, nausea, asthenia, and presyncope occurred, leading to temporary treatment interruption. Nonetheless, the patient reported symptom improvement after using common analgesics, which was previously unattainable.

Conclusion
Peripheral blocks are highly effective in treating various types of headaches, including refractory cases as the one reported, secondary to meningeal infection. However, even after well-succeeded sessions, it is crucial to monitorate the patients due to the possible collateral effects, such as vertigo, nausea, asthenia and presyncope. Further studies are necessary to investigate the relevance of these effects and their causes.