Greater occipital nerve block as an add-on therapy to monoclonal antibodies in chronic migraine: A small case series

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BACKGROUND

Greater occipital nerve block (GON-B) is a safe, minimally invasive procedure that targets a branch of the C2 dorsal ramus, modulating pain pathways within the trigeminocervical complex and, as a consequence, reducing the intensity/frequency of the migraine attacks. The procedure is generally well tolerated, with minimal side effects such as numbness, tingling and local discomfort. However, its application varies in terms of technique, drugs and dosages, as no standard protocol has been established yet.

MATERIAL AND METHODS

Six patients diagnosed with drug-resistant chronic migraine (mean attack frequency per month 28.6), who had achieved only partial benefit from mAbs, underwent add-on therapy with GON block. The group of patients included 4 women (66.6%- with a median age of 50 years) and 2 men (33.3%- with a median age of 32 years); all of them had occipital tenderness. The injection site was considered approximately one-third of the distance from the occipital protuberance to the mastoid process (*Fig. 1*). We performed subcutaneous infiltrations with 10 ml of lidocaine (10 mg) and methylprednisolone long-acting (40 mg) at the baseline (T0), after 7 and 15 days (T1 and T2), followed by monthly injection. **Efficacy** was defined as a 50% reduction in attack frequency between consecutive infiltrations. **Safety** was assessed based on the tolerability and adverse events (AE).

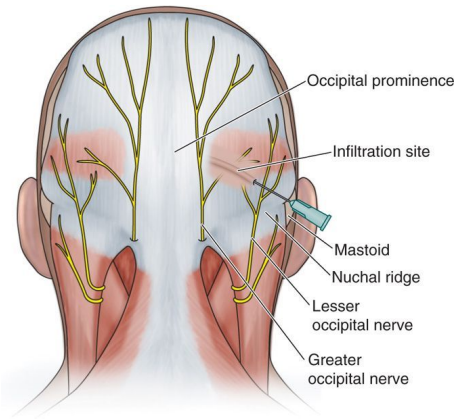

Fig. 1 - injection site

RESULTS

Based on headache diary monitoring, after the first injection (T0) three patients experienced a complete response (>50%); two of them had a partial benefit and just one patient did not experience a meaningful clinical improvement. Therefore, the treatment was continued, with the exception of two patients who discontinued after the second and third injections respectively, due to localized cutaneous liponecrosis at the injection site.

CONCLUSIONS

Although GON block seems able to enhance therapeutic outcomes in most patients, the occurrence of cutaneous liponecrosis - probably due to Depo-methylprednisolone, known for its longer tissue retention - raises concerns regarding the safety of the long-acting corticosteroid used within a procedure rarely associated with side effects. GON block may be effective as an adjunctive treatment in selected patients with refractory chronic migraine receiving mAbs. However, the potential for long-acting corticosteroid related AE, such as localized liponecrosis, warrants careful consideration, particularly with repeated administrations. A standardized protocol would promote a more widespread use of such an appealing preventive treatment in chronic migraineurs.

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