Comparison of greater occipital nerve and supra orbital nerve blocks methods in the treatment of acute migraine attack: a randomized double-blind controlled trial


SUMMARY:

- Several recent articles have been published in the past few years examining greater occipital nerve block (GON) for migraine headache treatment, including in the ED setting. Overall, the results have been favorable, although the exact pharmacology of this treatment is not entirely clear.
- Recently, we covered an article that tempered enthusiasm by showing that GON block has a success similar to or lower than that of metoclopramide for acute migraine attacks and even suggesting that GON block might just act as a placebo.
- In this study, the authors, from a single site in Turkey, examined GON and supraorbital nerve (SON) block alone and in combination, compared with a sham placebo, for the treatment of acute migraine in ED patients.
- The study is well designed. A research nurse screened patients for eligibility. Those with migraine with or without aura were eligible. Of 201 eligible patients, 128 were randomized to 1 of 4 arms. Each patient received 2 injections: 1 in the GON area and 1 in the SON area. The injection was either saline or 1% lidocaine. Therefore, the groups were GON block plus sham, SON block plus sham, GON block plus SON block with no sham, or GON sham plus SON sham (placebo). The primary outcome was the change in the Visual Analogue Scale score (VAS) at 120 minutes. Rescue meperidine was used as needed.
- A total of 128 patients were randomized. The average age was 35, and the mean VAS indicating pain at baseline was 75. The active treatments (nerve blocks) resulted in a dramatically greater improvement in the VAS than the placebo, with an average decrease of 55 and 9.9 (a value not even clinically significant), respectively. The mean decrease in the VAS was 54 for GON alone and 42 for SON alone. For GON and SON combined, the mean decrease in the VAS was 59. Rescue medications were used infrequently in the nerve-block groups, at 2-20% of the time, compared with 74% of the time in the placebo group. The rapid decrease in the VAS observed in the nerve-block groups was evident only after 30 minutes.
- This study provides fair evidence that nerve blocks, particularly GON, have an important nonplacebo effect on headache pain reduction. However, it does not provide information on how this strategy fares in comparison or together with other standard medical therapies.

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EDITOR’S COMMENTARY: This is a first-in-kind study looking at the utility of combined GON and SON blocks, compared with sham placebo, for the treatment of acute migraine in the ED. The results strongly support the use of GON block, and provide weaker evidence favoring the SON block or combined GON and SON block strategies. These results should be tempered by the small size of this study.

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