

EFFICACY OF REPETITIVE GREAT OCCIPITAL NERVE BLOCKS IN EPISODIC CLUSTER HEADACHE: A RETROSPECTIVE REAL-WORLD STUDY FROM A TERTIARY HEADACHE CENTER

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Background. Cluster headache (CH) is one of the most severe forms of primary headache, characterized by excruciating unilateral pain and autonomic symptoms. While preventive medications require weeks to titrate, rapid transitional therapies are crucial to provide immediate relief. Greater occipital nerve (GON) blocks have emerged as a valuable short-term intervention; however, evidence regarding standardized repetitive protocols in real-world tertiary care settings remains to be fully elucidated.

Methods. we collected the data of 106 episodic cluster headache patients (58.0□14.1 years old) treated with great occipital nerve blocks from January 2012 to march 2026 in our headache tertiary center (ASUFC, Ospedale S. maria della misericordia Udine, Clinica Neurologica). Each patient was treated with 4 GON nerve blocks (Bupivacaine 30mg and triamcinolone 20mg), each one spaced one week apart.We collected demographic data at baseline and, at each assessment, data regarding mean attack intensity, number of attacks per week, and attack duration were also collected. FSS, ESS, PSQI scales at the baseline and after the fourth treatment was also collected. The mean bout duration was 49.3□19.0 days, the patients were treated 21.4□12.5 days after the start of the bout. 51 patients were on medications (verapamil or corticosteroids).

Results. The repeated measure anova showed a significant reduction in headache attacks per week mean headache NRS intensity, and mean duration of the headache attacks ($p<0.001$). There was a significant improvement in sleep quality (PSQI 7.1□4.3 vs5.2□3.4, p 0.005), while there were no significant differences regarding ESS and FSS scales. No differences were found between the patients on medication and those drugs free.

Conclusions. A protocol of four weekly great occipital nerve blocks is highly effective in reducing the frequency, intensity, and duration of attacks in patients with episodic cluster headache, while significantly improving sleep quality. Notably, its efficacy is independent of concomitant preventative medications, supporting its use as a powerful transitional or standalone treatment in tertiary care.