Comparison of Therapeutic Effects of Greater Occipital Nerve Blockade, Topiramate and Flunarazine in Episodic Migraine

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Objective: The preventive drug therapy in migraine is for reducing the attack frequency, severity and duration of the headache. Flunarizine and topiramate are widely used in the prevention of migraine attacks. Greater occipital nerve block (GONB) is an alternative treatment option which is used in the prophylactic treatment of migraine. In this study we compared the effectiveness of GONB, topiramate and flunarizine by means of reduction in post treatment VAS scores and attack frequencies in episodic migraine patients in a one month period.

Material and Methods: One hundred and twenty migraine patients were aimed to be divided into three treatment groups namely flunarazine, topiramate and GONB. Patients were followed for 4 weeks and attack frequencies and VAS scores were recorded weekly. At the end of fourth week, response rates, rates of 50% and 75% or more reduction in VAS and attack frerquencies were calculated. Gorups wise comparsions were assessed statistically.

Treatment protocol

Flunarizine was introduced with a single dose of 10 mg/day. Topiramate was administered twice a day at a dose of 25 mg/day, which was increased to 100 mg/day in the second week. The GONB solution was prepared with 1 ml triamcinolone (40mg), 2 ml bupivacaine (10 mg), and 1 ml 0,9% NaCl. The solution was administered using a 22G × 1¼" (0.7 × 40mm) injector with the patient lying prone on the table. Injection was applied to medial of the occipital artery localized at the medial one-third of the superior nuchal line between the occipital tubercle and

mastoid process. The scalp was cleaned with iodine before the procedure, and the injections were performed bilaterally at a volume of 2 mL after negative aspiration for blood.

Statistical analysis

Normality of distribution was assessed with the D'Agostino-Pearson test. Continuous variables with a normal distribution were assessed in two or more groups using the Student's t-test and ANOVA test, respectively. Non-parametric counterparts of these tests (Mann Whitney U and Kruskal-Wallis tests) were utilized to compare the data that were not normally distributed. Nominal categorical data were assessed using the chi-square test. The pre- and post-treatment comparison of normally and non-normally distributed data were undertaken using the paired t-test and the Wilcoxon test, respectively. A two-tailed p value of <0.05 was considered to be statistically significant.