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Direct comparison of treatment outcome between the Botulinum Toxin and cgrp monoclonal antibody in migraine patients

Abstract:

Background: Migraine is a genetic disorder characterized by recurrent episodes of headache that are throbbing in nature. The two main treatment options for migraine include the use of Botulinum neurotoxin (BoNT) and Calcitonin gene-related peptide (CGRP) inhibitors. But which of the two drugs is superior in terms of efficacy and safety is not yet established. Therefore the objective of this study was to directly compare the efficacy and safety of anti-CGRP and BoNT for the preventive treatment of chronic migraine.

Materials and methods: This Quaisi experimental comparative study was conducted on 80 "Chronic Migraine patients" at King Fahad University Hospital, Dammam, KSA. The selected chronic Migraineurs were divided into 2 groups (40 patients/group) and were treated with the standard doses of: GROUP I (BoNT) and GROUP II (Anti-CGRP).All the patients filled out the Migraine Pain scale(MPSQ), the migraine disability assessment score (MIDAS), Headache Impact Test (HIT-6) and Adverse Drug Event Questionnaire (PRADQ) before the start and at the end of 9 months treatment.

Results: Most of the patients were females (76.3 vs 23.8 %) and were suffering from Migraine for more than 24 months (66 %). The mean age of the participants was 39.07 ± 10.01 years. Both BoTN and Anti-CGRP groups showed a statistically significant decrease in mean HIT-6 and Pain scores after nine months of intervention (p-values 0.005 and 0.000 in the Botulinum group vs 0.000 and 0.000 in Anti-CGRP group). A direct comparison between the two treatment groups showed that anti- CGRP drug caused a higher decrease in HIT-6 and Pain scores as compared to the botulinum drug, but the difference was not statistically significant(p-values 0.075 and 0.07respectively). The most common adverse effect was "headache", reported by 45 % and 40 % of patients, followed by the " Pain at site of injection" reported by 27.5 % and 32.5 % of BoTN and anti-CGRP groups respectively. The two groups did not differ significantly in the frequency of various adverse effects such as nausea, vomiting, visual problems, etc. except "joint stiffness". A significantly higher number of anti- CGRP patients experienced joint stiffness ascompared to BoTN group(17.5% vs 0%, p value=0.006) .

Conclusion: A direct comparison between the two treatments indicated that neither of the two interventions is statistically superior to the other in terms of efficacy and both are equally effective in the management of migraine. But, BoNT can be preferred over Anti- CGRP because of its cost effectiveness.

Biography

Miss Deena Aldossary is a researcher at Imam Abdulrahman bin Faisal University, Saudi Arabia. Her work focuses on comparing treatment outcomes of botulinum toxin and CGRP monoclonal antibody in migraine patients.