Risperidone Plus Topiramate In Children With Autistic Disorder: A Double-blind, Randomized Trial

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Background: Autism is a complex neurodevelopmental disorder that forms part of a spectrum of related disorders referred to as Autism Spectrum Disorders (Mohammadi and Akhondzadeh, 2007). The present study assessed the effects of topiramate plus risperidone in the treatment of autistic disorder.

Methods: Forty children between the ages of 4 and 12 years with a DSM IV clinical diagnosis of autism who were outpatients from a specialty clinic for children were recruited. The children presented with a chief complaint of severely disruptive symptoms related to autistic disorder. Patients were randomly allocated to topiramate + risperidone (Group A) or placebo + risperidone (Group B) for an 8-week, double-blind, placebo-controlled study. The dose of risperidone was titrated up to 2 mg/day for children between 10 and 40 kg and 3 mg/day for children weighting above 40 kg. The dose of topiramate was titrated up to 200 mg/day depending on weight (100 mg/day for <30 kg and 200 mg/day for >30 kg). Patients were assessed at baseline and after 2, 4, 6 and 8 weeks after starting medication. Measure of outcome was the Aberrant Behaviour Checklist-Community (ABC-C) Rating Scale. The trial was performed in accordance with the Declaration of Helsinki and subsequent revisions and approved by the ethics committee at Tehran University of Medical Sciences. Written informed consents were obtained from the parents of patients before entering into the study. A two-way repeated measures analysis of variance was used. The two groups were considered as a between subjects factor (group) and the five measurements during treatment were considered as a within-subjects factor (time) in the analyses.

Results: Difference between the two protocols was significant as the group that received topiramate had greater reduction in ABC-C subscale scores for irritability, stereotypic behaviour and hyperactivity/non-compliance (F=80.05, df=1.98, P≤ 0.0001; F=27.94, df=1.24, P≤ 0.0001 and F=103.24, df=1.68, P≤ 0.0001 respectively).

Conclusion: The results suggest that the combination of topiramate with risperidone may be superior to risperidone monotherapy for children with autistic disorder. However the results need to be further confirmed by a larger randomized controlled trial.