BIPERIDEN FOR THE TREATMENT OF SEGMENTAL AND GENERALIZED DYSTONIA

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Introduction: Anticholinergics are one of the first-line pharmacological treatments of dystonia. Trihexyphenidyl is the most frequently recommended and investigated anticholinergic drug for dystonia; however, it is not available worldwide. Our primary aim was to investigate the efficacy of biperiden, another anticholinergic drug, on the severity and disability related to dystonia of non-tardive origin.

Methods: Twenty-three patients with segmental or dystonia (primary n=15, juvenile cerebral palsy n=3; neurodegeneration with brain iron accumulation n=2, post-stroke n=2; deafness-dystonia-optic neuropathy syndrome n=1) aged 22-76 years were enrolled. Biperiden was slowly titrated to the highest tolerated dose. Burke-Fahn-Marsden Dystonia Rating and Dystonia Disability Scales were obtained before and 12 weeks after biperiden treatment was initiated. Due to biperiden side-effects, four patients did not complete the trial.

Results: Severity of dystonia improved from 44 points (median; 31.5-47 points, 25th and 75th percentiles respectively) to 30 points (median, 23.5-47 points), which was considered as a significant change (p=0.01). The size of improvement correlated with the applied biperiden dosage (r=0.451, p< 0.01). Of 19 participants completed the study, only 736.9% had an improvement larger or equal to 25% (treatment responders). Simultaneously, the disability scale also showed a significant improvement (10%).

Discussion: Comparing our results to that of other studies, we may conclude that biperiden may be tried for treating segmental or generalized dystonia in those countries where trihexyphenidyl is unavailable. However, further studies are required involving larger population of patients and utilizing double-blinded, placebo-controlled design to precisely evaluate its therapeutic efficacy.