Tetrabenazine: Effective Treatment for Tardive Dyskinesia

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ABSTRACT

OBJECTIVE: To describe long-term experience with tetrabenazine (TBZ) in the treatment of tardive dyskinesia. 

BACKGROUND: Tetrabenazine depletes monoamines and is used as a drug of choice for treatment of chorea associated with Huntington’s disease (HD) and tardive dyskinesia (TD). In TBZ, uncontrolled involuntary movements return and again improved when TBZ was reinstated.

METHODS: We report the clinical experience of a tertiary movement disorders center over 25 years of TBZ treatment. Four hundred and sixty-eight patients were treated with TBZ at the Parkinson’s Disease Center and Movement Disorders Clinic at Baylor College of Medicine since we received Notice of Claimed Investigational Exemption. Discontinuation of relationship to TBZ as either “probable”, “possible”, or “unlikely”.

RESULTS: A total of 448 patients were treated with TBZ during the three to six months per protocol. Of the 139 patients with adequate follow-up, 83.5% reported very good improvement in function. TBZ has been reported to have an ameliorating effect in a variety of hyperkinetic movement disorders, including TD, Huntington disease, Tourette syndrome, and other involuntary movement disorders, but the drug has not yet been approved for the treatment of the disorders in the US. Marked improvement in chorea was reported in 83% of the first 90 patients, treated between 1980 and 1995 (Jankovic and Beach, Neurology 48:358-362,1997). The drug was well tolerated and no serious adverse events were noted. METHODS: A retrospective chart review was performed on subjects treated with TBZ between 12/1986 and 12/2004. Response to treatment was assessed by a previously published response scale (1 = marked improvement; 4 = no response; 5 = worsening) (Jankovic and Beach, 1997). All adverse events were captured and coded according to their relationship to the study drug.

RESULTS: A total of 448 patients were treated with TBZ during the specified period. 149 (115 female) had a diagnosis of TD, mean age of 58.8 (20-82.7) years and mean duration of symptoms at initiation of therapy was 5.2 (0-46.4) years. Patients were followed for a mean of 20.7 (1.3-135.5) months. Severity rating moderate to severe. The mean total daily dose was 56.6 mg (25.23 mg to 200 mg). The most common side effects included parkinsonism (27.5%), drowsiness or fatigue (24.2%), akathisia (10.1%), nervousness/anxiety (0.5%), nausea (4.0%), 40% reported no adverse effects. Most side effects were controlled with dose maintenance or dose-reduction. Of the 139 patients with adequate follow-up, 50.9% reported marked or moderate reduction in abnormal movements (response score of 1 or 2) at first follow-up visit and 85.7% at the last visit (N=139 by Wilcoxon test). A wide range of concomitant medications were also utilized by these patients, with no apparent drug-drug interaction noted. CONCLUSION: TBZ is a safe and effective drug for the treatment of movement disorders associated with TD. The benefits are sustained for years.

CONCLUSIONS

The analysis of a cohort of patients with moderate to severe TD treated by Baylor College of Medicine with TBZ (625-200 mg per day) between January 1997 and January 2004 shows that the drug is effective in the treatment of tardive dyskinesia. In most patients in whom TBZ was discontinued, the involuntary movement returned and again improved when TBZ was reinstated. Furthermore, the mood and anxiety problems were the most common side effects, but these symptoms improved with reduction in dosage. The high response rate is sustained over the duration of treatment, which for some patients was more than a decade.