ACTH has beneficial effects on stuttering in ADHD and ASD patients with ESES: A retrospective study.

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Abstract

INTRODUCTION:
Etiology of stuttering remains unknown and no pharmacologic intervention has been approved for treatment. We aimed to evaluate EEG parameters and the effect of adrenocorticotropin hormone (ACTH) therapy in stuttering.

METHODS:
In this retrospective study, 25 patients with attention deficit and hyperactivity (ADHD) or autism spectrum disorder (ASD), and comorbid stuttering were followed and treated with ACTH for electrical status epilepticus in sleep (ESES). Sleep EEGs were recorded at referral and follow-up visits and short courses of ACTH were administered when spike-wave index (SWI) was ≥15%. The assessment of treatment effectiveness was based on reduction in SWI, and the clinician-reported improvement in stuttering, and ADHD or ASD. Statistical analyses were conducted in order to investigate the relationship between the clinical and EEG parameters.

RESULTS:
Following treatment with ACTH, a reduction in SWI in all the patients was accompanied by a 72% improvement in ADHD or ASD, and 83.8% improvement in stuttering. Twelve of the 25 patients with stuttering showed complete treatment response. Linear regressions established that SWI at final visit significantly predicted improvement in ADHD or ASD, and in stuttering. If symptoms had recurred, improvement was once again achieved with repeated ACTH therapies. Stuttering always improved prior to, and recurred following ADHD or ASD.

CONCLUSION:
The underlying etiology leading to ESES may play a significant role in the pathophysiology of stuttering and connect stuttering to other developmental disorders. ACTH therapy has beneficial effects on stuttering and improves EEG parameters.