The study of convergence insufficiency in children with attention deficit hyperactivity disorder.

Elsayed DA, Abdou RM.

Egypt J Otolaryngol 2015;31:250-3

Introduction
Attention deficit-hyperactivity disorder (ADHD) is characterized by low levels of attention and concentration and high levels of activity, distractibility, and impulsivity. Convergence insufficiency (CI) is a common condition that is characterized by a patient's inability to maintain proper binocular eye alignment on objects as they approach from distance to near. Several studies have been conducted to discover the relationship between ADHD and CI. Researchers reported that children with CI had a higher frequency of parent-reported ADHD and/or learning problems, but their studies were limited to patients with CI.

Aim of the work
The purpose of this study was to identify patients with CI in a cohort of patients diagnosed with ADHD.

Materials and methods
The study included 20 children diagnosed with ADHD. They were diagnosed on the basis of the clinical assessment and fulfilling the diagnostic criteria of the DSM-IV. Other assessments included mental age assessment using the Stanford-Binet scale and ADHD assessment using Conners' parents rating scale. Participants underwent complete ophthalmologic examination: visual acuity test using an illiterate E chart; stereopsis using Lang card; cover tests; convergence amplitude; near point of convergence; slit-lamp examination for the anterior segment; cycloplegic refraction; and fundus examination. Written informed consent was taken from the parents of all children included in the study.

Results
CI was present in 35% of cases, with a near point of convergence more than 6.

Conclusion
CI appeared to be a comorbid disorder in patients with ADHD, and may cause misdiagnosis, or exacerbation of the symptoms of ADHD. Patients diagnosed with ADHD should be evaluated for CI. It is worthy of mention that CI is a disease that can be effectively managed with orthoptic exercises, or surgically.