

ADHD SYMPTOMS: RELATION TO OMEGA 3 SERUM LEVELS BEFORE AND AFTER SUPPLEMENTATION

S. Effat¹, N. Mohamed², H. Hussein¹, **H. Azzam**¹, A. Gouda³, H. Hassan²

¹Institute of Psychiatry Ain Shams University, ²Department of Research on Children with Special Needs, ³Department of Biochemical Genetics, National Research Centre, Cairo, Egypt

Introduction: There has been a continued debate in the last decade about the possible role of polyunsaturated fatty acids especially omega-3 fatty acids in attention deficit hyperactivity disorder (ADHD) either as a causative factor - on deficiency - or as a treatment.

Aim: To compare omega-3 fatty acids status in children with ADHD to normal children and to study the efficacy of high dose supplementations of fatty acids on symptoms of ADHD.

Subjects & methods: 40 children diagnosed with ADHD combined type and another 40 normally developing as a control group. All patients were subjected to Mini International Neuropsychiatric Interview for Children ,IQ assessment, Conners' Parent Rating Scale-Revised long version (CPRS-R-L) ,Vigil continuous performance test. The patients were prescribed omega-3 fatty acid supplement daily dose of 900 mg EPA and 600 mg DHA for 3 months. After end of the 3 months these children were assessed again using the Conners' parent rating scale-revised and Vigil continuous performance test.

Results: Significantly lower levels of EPA and DHA in ADHD group compared to normal control inverse correlation between DHA on one side and Conner's ADHD index; inattentive subtest and total DSMIV indexed on the other side **Conners' ADHD index subscale** there was a statistically significant improvement following the treatment.

Conclusion: Low levels of omega 3 may contribute to the symptoms of ADHD. Supplementing omega 3 in the treatment of ADHD could be a useful add on tratment specially in cases demonstrating low serum levels.