

ARBOHYDRATE-DEFICIENT TRANSFERRIN DOES NOT SEEM TO BE ASSOCIATED WITH ADHD AND AUTISM

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A biomarker for alcoholism called Serum carbohydrate-deficient transferrin (CDT) is considered to be a reliable parameter reflecting long-term alcohol abuse (Stibler et al. 1988). It has been shown that CDT is not superior to other parameters previously identified (Scouller et al. 2000). CDT is also elevated in females suffering from psychiatric disorders inducing catabolism, limiting its diagnostic value in this subgroup (Reif et al. 2001). Excessive movements, as occur in patients suffering from ADHD and autism, may also induce catabolism. That is why we investigated whether CDT was also elevated in patients suffering from ADHD and autism combined with psychomotor agitation and whether it was influenced by Methylphenidate therapy, which reduces this psychomotor agitation.

We identified five male patients diagnosed with ADHD by clinical observation and Conner rating scale, receiving treatment for ADHD in our department. The mean age was 17 (6.9) years, the IQ was within the normal range (81-104). One was excluded due to concomitant alcohol abuse (he had clearly elevated CDT). Routine laboratory parameters including thyroid hormones were recorded from the charts as well as case histories. CDT was determined before starting Methylphenidate therapy and also repeatedly during methylphenidate therapy (5-20 mg daily, administered for 3 months) and psychotherapy.

We also identified three male patients diagnosed with autism combined with psychomotoric agitation by clinical observation, Conner scales and the ABC rating scale (Aman et al 1985), receiving psychological and pedagogical treatment for Autism in our department. Their mean age was 13 (5.2) years. Two of them received psychopharmacological treatment with Risperidone 2mg daily for > 1 year. CDT was determined once.

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The ADHD patients did not show elevated CDT values nor did they experience any direct changes during psychopharmacological treatment with Methylphenidate (Table 1).

Table 1. CDT values in ADHD patients and changes under Methylphenidate therapy.

Patient no.	CDT (start)	CDT (end)
1	0.3	0.5
2	0.6	0.7
3	0.6	0.6
4	0.7	0.7
5	0.7	0.8

In all patients suffering from autism combined with psychomotor agitation, CDT was also within the normal range.

CDT does not seem to be elevated in ADHD patients and patients suffering from autism. Methylphenidate therapy does not influence CDT levels significantly. This fact supports the forensic importance of CDT.

We conclude that CDT does not seem to have an important role in the diagnostic process of ADHD and autism.

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