

Familial Occurrence of Attention Deficit, Reading, Mood and Sleep Disorder in ADHD With and Without Reading Disorder

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Attention deficit-hyperactivity disorder (ADHD) is a heterogeneous syndrome with which the less heterogeneous disorder of reading (RD) may co-occur (Shaywitz and Shaywitz, 1992). Our prior work demonstrated impaired vigilance associated with daytime somnolence in 40% of ADHD +/- RD students. Mood disorders are common in both ADHD and RD populations as well as in the relatives of ADHD only subjects (Weinberg and Brumback, 1992; Biederman et al., 1991). A familial link between ADHD, RD, mood and sleep disorders may explain the association and provide insight into the psychopharmacological treatment of ADHD.

42 DSM-III-R ADHD patients, 13 of whom also met DSM-III-R criteria for RD were compared by structured interview of parents and patients with 49 neurologic controls as to familial occurrence in first degree relatives of ADHD, RD, mood disorder and sleep disorder in a referral outpatient adult and developmental child neurologic service. Studied were 29 ADHD without RD (25 male; mean age 12 yrs), 13 ADHD with RD (9 male; mean age 12 yrs) and 49 neurologic controls with no ADHD or RD seen for non-behavioral symptoms (36 male; mean age 27 yrs). Dysthymic, major affective and bipolar disorders were combined. Analysis was by Cochran-Mantel-Haenszel statistic).

Family history –

ADHD: control- 1 (2%); ADHD only- 7 (24%) $p = .002$; ADHD+RD- 4 (31%) $p = .001$.

RD: control- 3 (6%); ADHD- 9 (31%) $p = .003$; ADHD+RD- 9 (69%) $p = <.001$ and $.02$ vs. ADHD only.

Mood Disorder: control- 7 (14%); ADHD only- 13 (45%) $p = .003$; ADHD+RD- 5 (38%) $p = 0.13$.

Sleep Disorder: control- 0; ADHD only- 0; ADHD+RD- 4 (31%); $p = .001$.

Concurrent Family Diagnosis: RD and ADHD: control 0, ADHD only 2, ADHD+RD 2; ADHD or RD with mood disorder – control 0, ADHD only 5, ADHD +RD 4. Two of the four families with RD and sleep disorder included 2 with depression. Childhood ADHD with or without RD is associated with increased risk of familial occurring ADHD. Concurrent RD is associated with increased risk of RD in family members. The RD in ADHD therefore may be familial and similar to other forms of familial RD (Gilger, Pennington, DeFries, 1992). ADHD with or without RD increases the risk for familial mood disorder. Thus when mood disorder is co-morbid with ADHD it may be familial in origin. The presence of RD increases the probability of familial sleep disorder. Correlation of family history in ADHD with biobehavioral measures, as well as acute and long term treatment response may clarify the biological relationship between these disorders and optimize their management.

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