Risk for emerging bipolar disorder, variants, and symptoms in children with attention deficit hyperactivity disorder, now grown up.

Elmaadawi AZ, Jensen PS, Arnold LE, Molina BS, Hechtman L, Abikoff HB, Hinshaw SP, Newcorn JH, Greenhill LL, Swanson JM, Galanter CA.


Abstract
AIM: To determine the prevalence of bipolar disorder (BD) and sub-threshold symptoms in children with attention deficit hyperactivity disorder (ADHD) through 14 years’ follow-up, when participants were between 21-24 years old.

METHODS: First, we examined rates of BD type I and II diagnoses in youth participating in the NIMH-funded Multimodal Treatment Study of ADHD (MTA). We used the diagnostic interview schedule for children (DISC), administered to both parents (DISC-P) and youth (DISCY). We compared the MTA study subjects with ADHD (n = 579) to a local normative comparison group (LNCG, n = 289) at 4 different assessment points: 6, 8, 12, and 14 years of follow-ups. To evaluate the bipolar variants, we compared total symptom counts (TSC) of DSM manic and hypomanic symptoms that were generated by DISC in ADHD and LNCG subjects. Then we sub-divided the TSC into pathognomonic manic (PM) and non-specific manic (NSM) symptoms. We compared the PM and NSM in ADHD and LNCG at each assessment point and over time. We also evaluated the irritability as category A2 manic symptom in both groups and over time. Finally, we studied the irritability symptom in correlation with PM and NSM in ADHD and LNCG subjects.

RESULTS: DISC-generated BD diagnosis did not differ significantly in rates between ADHD (1.89%) and LNCG (1.38%). Interestingly, no participant met BD diagnosis more than once in the 4 assessment points in 14 years. However, on the symptom level, ADHD subjects reported significantly higher mean TSC scores: ADHD 3.0; LNCG 1.7; P < 0.001. ADHD status was associated with higher mean NSM: ADHD 2.0 vs LNCG 1.1; P < 0.0001. Also, ADHD subjects had higher PM symptoms than LNCG, with PM means over all time points of 1.3 ADHD; 0.9 LNCG; P = 0.0001. Examining both NSM and PM, ADHD status associated with greater NSM than PM. However, Over 14 years, the NSM symptoms declined and changed to PM over time (df 3, 2523; F = 20.1; P < 0.0001). Finally, Irritability (BD DSM criterion-A2) rates were significantly higher in ADHD than LNCG (χ²(2) = 122.2, P < 0.0001), but irritability was associated more strongly with NSM than PM (df 3, 2538; F = 43.2; P < 0.0001).

CONCLUSION: Individuals with ADHD do not appear to be at significantly greater risk for developing BD, but do show higher rates of BD symptoms, especially NSM. The greater linkage of irritability to NSM than to PM suggests caution when making BD diagnoses based on irritability alone as one of 2 (A-level) symptoms for BD diagnosis, particularly in view of its frequent presentation with other psychopathologies.