Memory characteristic in boys with attention deficit/hyperactivity disorder comorbid learning disability.


Abstract

OBJECTIVE: To explore the memory characteristic in boys with attention-deficit/hyperactivity disorder (ADHD) plus learning disability (LD).

METHODS: A total of 97 ADHD boys with comorbid LD (ADHD+LD), 97 ADHD boys without comorbid LD (ADHD-LD) and 97 healthy controls (based on the criteria of DSM-IV) were recruited from the outpatient clinic of Peking University Sixth Hospital from December 2003 to September 2012. Individuals across three groups were matched by ages, intelligence quotient (IQ) and ADHD subtypes. The Wechsler Memory Scale (WMS) was used to access the characteristics of several memory domains.

RESULTS: ADHD+LD group performed the worst and control group the best in memory quotient (MQ) (90 ± 15 vs 98 ± 14 & 104 ± 14) and long-term memory domain ((36.0 ± 10.2) vs (42.1 ± 7.8) & (45.6 ± 6.7) score, all P < 0.05). ADHD+LD group scored significantly lower than the control group in short-term memory (53.0 ± 9.2) vs (58.0 ± 9.7) score, P < 0.05) and immediate memory domains (10.0 ± 3.3 vs (11.3 ± 3.5) score, P < 0.05). However, ADHD+LD group scored slightly but not significantly lower than the ADHD-LD group (54.9 ± 10.7, 10.8 ± 3.2 score, P > 0.05). In most subscales of WMS, ADHD+LD group scored significantly lower than both ADHD-LD and control group in current information and orientation, mental control (1→100), mental control (100→1) and associate learning subscales (8.8 ± 3.1) vs (10.0 ± 3.0) & (9.9 ± 2.3) score, 8.7 ± 4.1 vs (10.0 ± 3.9) & (11.1 ± 3.6) score, (10.7 ± 3.9) vs (12.9 ± 2.8) & (13.7 ± 2.2) score, (9.8 ± 3.1) vs (10.8 ± 2.6) & (11.1 ± 2.1) score, all P < 0.05). In mental control (accumulation) subscale, all pairwise comparisons were statistically significant (all P < 0.05). In subscales of figure memory, visual reproduction and digit span, ADHD+LD scored significantly lower than the control group (all P < 0.05), but not the ADHD-LD group (all P > 0.05).

CONCLUSIONS: Boys with ADHD comorbid LD show deficits in overall memory function and long-term memory while short-term memory is partially damaged. Impairment in immediate memory is not detected.