Auditory brainstem response (ABR) profiling tests as diagnostic support for schizophrenia and adult attention-deficit hyperactivity disorder (ADHD).

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Abstract

OBJECTIVE:
To evaluate the performances of two auditory brainstem response (ABR) profiling tests as potential biomarkers and diagnostic support for schizophrenia and adult attention-deficit hyperactivity disorder (ADHD), respectively, in an investigator-initiated blinded study design.

METHOD:
Male and female patients with schizophrenia (n=26) and adult ADHD (n=24) meeting Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM IV) diagnostic criteria and healthy controls (n=58) comprised the analysis set (n=108) of the total number of study participants (n=119). Coded sets of randomized ABR recordings were analyzed by an independent party blinded to clinical diagnoses before a joint code-breaking session.

RESULTS:
The ABR profiling test for schizophrenia identified schizophrenia patients versus controls with a sensitivity of 84.6% and a specificity of 93.1%. The ADHD test identified patients with adult ADHD versus controls with a sensitivity of 87.5% and a specificity of 91.4%.

CONCLUSION:
The ABR profiling tests discriminated schizophrenia and ADHD versus healthy controls with high sensitivity and specificity. The methods deserve to be further explored in larger clinical studies including a broad range of psychiatric disorders to determine their utility as potential diagnostic biomarkers.