Attention impairments and ADHD symptoms in adult narcoleptic patients with and without hypocretin deficiency.

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Abstract

BACKGROUND:
Attentional complaints are common in narcolepsy patients and can overlap with daytime sleepiness features. Few studies attempted to characterize attentional domains in narcolepsy leading to controversial results. We aimed to assess the impact of hypocretin deficiency on attentional functioning by comparing performances on the attention network test (ANT) of narcoleptic patients with hypocretin deficiency (narcolepsy type 1-NT1) versus patients without hypocretin deficiency (narcolepsy type 2-NT2) and healthy controls. We also addressed frequency and severity of psychopathological symptoms and their influence on performances on ANT.

METHODS:
Twenty-one NT1 patients, fifteen NT2 patients and twenty-two healthy controls underwent the ANT, which allows assessing three separate attentional processes (alerting, orienting and executive control), and a psychometric assessment including questionnaires on attention-deficit hyperactivity disorder (ADHD), obsessive-compulsive disorder, anxiety and depression symptoms.

RESULTS:
NT1 and NT2 patients presented with slower reaction times compared to controls. NT1 patients exhibited an impairment of alerting network relative to NT2 and healthy controls, while orienting and executive control networks efficiency were comparable between groups. NT1 and NT2 displayed higher severity of ADHD inattentive domain than controls, NT1 patients also displayed higher severity of ADHD hyperactive domain and depressive symptoms. In NT1, ADHD and depressive symptoms were positively correlated.

CONCLUSIONS:
Despite a shared slowing of reaction times in both NT1 and NT2, a selective impairment of alerting network was present only in hypocretin deficient patients. Clinicians should carefully consider attentional deficits and psychopathological symptoms, including ADHD symptoms, in the clinical assessment and management of patients with narcolepsy.