symptoms of ADHD. In adults these core symptom are also present but inattention is more prominent. Correct diagnosis of ADHD remains challenging, especially as several other psychiatric and medical disorders show the similar symptomology.
Objectives The diagnosis of ADHD is clinical based upon a cluster of symptoms and criteria established by guidelines such as the DSM-5. Yet, objective markers are needed to support the clinical ADHD diagnosis in children and adults. Studies suggest that a neurobiological marker (eye vergence i.e. where the eyes move in opposite directions) can detect ADHD in children and adults. The eyes converge during orienting attention, as evidenced by visual event related potentials at parietal locations. This attention related vergence is impaired in ADHD patients.
Methods We review the neurobiology and findings of eye vergence and the relevance of its measurement for the clinical diagnosis of ADHD.
Results Neural circuits underlying eye vergence and attention largely overlap. Using machine learning, eye vergence measurements can classify ADHD in children and adults with high (> 90%) accuracy.
Conclusions Eye vergence is a promising candidate for an objective clinical diagnosis of ADHD.
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EV0161

Anxiety-depressive disorders in children: Neurobiological and neurohormonal aspects

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Objective The need for diagnosis and correct classification of depression among children is dictated by its burdeness with age, high risk of recurrence at further stages of child development and propensity to suicidal behavior.
Materials and methods One hundred and sixty adolescents with ADD were included in our study. The study design comprised: clinicopsychopathological, somatoneurological, psychological and neurohormonal methods.
Results Clustering symptom of anxiety and depression have shown that for children in early puberty is typical more formation of somatic (35.2%), behavioral (21.6%), phobic (21.6%) variants of depression, less-anxiety (13.5%), asthenia (8.1%). For children in puberty – apathetic (30.1%), anxiety (28.9%), dismorfofobic (27.7%), behavioral (13.3%) variants. The proportion of suicidal behavior of depression increases in proportion to age, mainly due to suicidal thoughts, sayings, auto-aggressive behavior. Analysis of the formation conditions of anxiety and depression in children showed a significant correlation of genetic, biological and socio-environmental components.
Symptoms of the minimal brain dysfunction (MBD) at an early ontogeny (prognostic value = +4.8), loaded natal period (PV = +4.2), frequent colds in the medical history (PV = 3.7), signs of cerebro-organic failure (PV = +3.8) and obesity as an endocrine disorder (PV = +2.1), sex and age of the manifestation of the first depressive episode in the early stages ontogenesis in boys aged 7 years (PS = +5.3), in girls aged 9 years (PS = +3.9) have been registered among biological risk factors for the ADD formation. Prognostic significance of neurohormonal parameters as regards the risk for ADD formation in adolescents is based on a decreased serotonin level in patients with depressive anxiety (PV = +2.8) and a reduced melatonin level, irrespective of the variant of clinical depression (PV = +2.4).
Conclusion Determination of neurobiological and neurohormonal risk markers for the development of the ADD makes it possible to carry out psychoprophylactic measures.
Keywords Children; Anxiety-depressive disorder; Prognostic value; Neuro-biological; Neurohormonal aspect
Disclosure of interest The authors have not supplied their declaration of competing interest.

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A technology for providing therapeutic training of children with the anxiety-depressive disorders, comorbid with obesity

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Background and aims The study considers the problem of the anxiety-depressive disorders (ADD) in children with concomitant obesity in the context of the search for effective methods of their correction.
Materials and methods Included 64 children at puberty with the anxiety-depressive disorders, comorbid with obesity. Design comprised: clinicopsychopathological, somatoneurological, psychological monitoring (CDRS-R); the Spielberger, "Me and my illness" and "Man in the Rain" projective drawing tests.
Results The symptoms of emotional and vegetative tension, depression registered in all studied children.
In the developed model of support, the interventions of primary level are aimed on family and closest encirclement of the child (family psychotherapy, psycho-educational programs for children and their parents). Strategies:
– stressful situation in the family (practical, psychological support and education of parents);
– for relief of depressive and vegetative-anxious symptoms (using art therapy, cognitive behavioral therapy);
– for education of patients in the wider context – quality of life, coping, motivation and modification of inappropriate behaviors (modeling of new cognitions).
The technology includes the diagnosis of the psychosomatic core of the disease, areas of neurotic fixation of the child with ADD and obesity, correction of emotional homeostasis and cognitive imbalance by activation of the personality individual resources as a result using cognitive-behavioral and art-dynamic therapy, as well as a "Control of eating behavior" training program, and solving certain situational problems by a child with the disease.
Conclusion Our method makes the tactics of psychotherapeutic and psycho-educational intervention at an early stage of the disease.
Keywords Children; Anxiety-depressive disorder; Art-therapeutic intervention
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