Pervasive developmental disorders

Pervasive developmental disorders (ICD-10: F84 (https://mkn10.uzis.cz/prohlizec/F84)) or *autism spectrum disorders* are developmental disorders characterized by difficulties in successfully adapting in society as a result of qualitative abnormalities of personality and psychosocial level (motor, emotional, voluntary, cognitive, speech abnormalities). A limited, stereotyped and repetitive set of interests and activities is typical.[1] The word "pervasive" means "all-pervading pervasive disorder is a disorder "affecting all areas of the psyche or social situation"[2] and expresses the fact that the child's development it is deeply disturbed in many directions.[3] The term autism is derived from the Greek word *autos* - self.

Autism is a severe, complex and complex defect of the developing brain with impairment of many psychological functions (neurodevelopmental disorder). It is a clinical behavioral and developmental syndrome and only a phenomenological diagnosis is possible. Most autistic children are not able to live independently even in adulthood and represent a great psychological burden for the entire family. Pathophysiology and etiology are not yet fully elucidated, there is no causal therapy. However, early diagnosis brings understanding and understanding, the possibility of timely initiation of behavioral and pedagogical interventions, and very necessary psychological and social support for the family.[4] Main ranges of clinical manifestations:

- deficits in social behavior,
- deficiencies in verbal and non-verbal communication,
- limited and repetitive schema of behavior and interests.[5]

Classification

- Autism (childhood × atypical);
- Rett´s syndrome;
- Asperger's syndrome;
- Other childhood disintegrative disorder;
- Hyperactive disorder associated with mental retardation and stereotypic movements.

Etiopathogenesis

Autism has a different etiology, a very wide spectrum of clinical manifestations and severity, which affect a person's complex behavior. Dysregulation of some neuromodulators has been hypothesized to play a role, but study results are mixed. According to some, some autistics have elevated levels of serotonin in the blood and, as a result, lower synaptic levels of serotonin in the brain.[6][7] Serum hyperserotonemia is also found in the closest relatives of autistic patients, it is considered an important marker of so-called "familial" autism. The conclusions of neuroimaging and functional examination studies are similarly diverse. Structural changes in the cerebral cortex (mainly the temporal and frontal lobes post mortem), the brainstem, the limbic system and the cerebellum are consistently and frequently reported.[4]

Functional magnetic resonance imaging shows that patients with autism perceive human faces only as inanimate objects. Autistics show hypoactivation of the right gyrus occipitotemporalis lateralis and bilateral amygdala – similar findings are found in patients with schizophrenia.[8] Neuroanatomical findings and post-mortem neurohistopathological findings describe an increased density of small and tightly packed neurons in the olfactory cortex and in some nuclei of the amygdala (emotion, anxiety, behavior) and hippocampus (structures of the limbic system – learning, memory) and a smaller number of Purkinje cells in the cerebellum (learning, anticipation, motor planning, imagination, planning the correct time sequence of performed activities). Various genetic abnormalities have been demonstrated in patients with autism. A postvaccination etiology of autism has not been established[9], this is more about the age-related coexistence of vaccine application with awareness and recognition of autism symptoms or autistic regression. [4]

According to etiopathogenesis:

- "idiopathic (primary, non-syndromic) autism",
  - etiology and often even pathogenesis are not yet known,
- "symptomatic, syndromic, secondary autism"
  - often associated with mental retardation
  - autism in Angelman syndrome, in fragile-X-chromosome syndrome, in DiGeorg syndrome, in congenital developmental defects brain or perhaps after experiencing congenital rubella.[4]

Clinical picture

Behavioral cognitive triad according to Wing:

- restriction of reciprocal social interactions (most important)
- limitation of reciprocal verbal and non-verbal communication
- restriction of imagination (fantasy) with a poor and stereotyped repertoire of behavior and interests.[4]

The symptoms of autism appear slowly and creepily from early childhood (ie from infancy). Due to the development and maturation of the brain, it is recommended to postpone the definitive diagnosis until the age of around 3 years for childhood autism, for atypical autism it can be a little later, and for Asperger's syndrome it is possible until around 6 years of age. A typical feature (described in about 30-39% of cases) is the so-called **autistic regression of speech and behavior** at about the age of 18-24 months.[4]

Childhood Autism

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- limitation of reciprocal verbal and non-verbal communication
- restriction of imagination (fantasy) with a poor and stereotyped repertoire of behavior and interests.[4]

The symptoms of autism appear slowly and creepily from early childhood (ie from infancy). Due to the development and maturation of the brain, it is recommended to postpone the definitive diagnosis until the age of around 3 years for childhood autism, for atypical autism it can be a little later, and for Asperger's syndrome it is possible until around 6 years of age. A typical feature (described in about 30-39% of cases) is the so-called **autistic regression of speech and behavior** at about the age of 18-24 months.[4]

Asperger's syndrome

- similar to childhood autism, but IQ is normal, in some components even above normal;
- often excellent mechanical memory;
- speech is normal, almost normal, sometimes even hypertrophic;
- disorders of pronunciation, peculiarities of diction and special intonation of speech appear,
- children are precocious, conventional, pedantic, like superficial conversation and mentoring;
- clumsiness of fine and gross motor skills;
- unusual interests and specific skills often realized with fanatical enthusiasm are typical;
- 8x more often in boys.[4]

Atypical Autism

- *pervasive developmental disorder unspecified*;
- problematic diagnosis, most difficult in children with severe and profound mental disabilities;
- children who, due to their intellectual abilities, have behavioral problems clearly disproportionately distributed in the basic triad of symptoms,

or those in whom problems in one of the three areas are almost absent - the problems in the behavioral triad must be clearly out of proportion to the overall level of intellect;

- often occurs in severely retarded individuals and individuals with a severe developmental receptive speech disorder.[4] [10]

Rett´s syndrome

- genetically heterogeneous syndrome with an incidence of 1:10,000 known only in girls – abnormal gene on the X chromosome;
- typically normal development by 7-24 months, then regression and loss of manual and verbal skills;
- stereotyped hand movements typically reminiscent of "washing" and the girl is unable to use her hands effectively;
- social interests and abilities are impoverished;
- episodes of hyperventilation, trouble chewing food;
- slowed head growth;
- later trunk ataxia and scoliosis or kyphoscoliosis develop;
- very often associated with epilepsy;
- girls end up severely mentally disabled.[4]

Childhood Disintegrative Disorder

- *Heller's Psychosis*
- rare disease;
- normal development up to 2.5–4 (maximum up to 6–10 years), then regression of speech, autistic-type behavior and breakdown of the individual's cognitive abilities, including the appearance of enuresis and encopresis.[4]

Therapeutic Options

- early educational interventions,
- special pedagogical guidance of autistic children,
- behavioral and educational therapy,
- education with psychotherapy of parents,
- symptomatically psychotropic drugs: neuroleptics, antidepressants, psychostimulants, agonists of alpha 2-adrenergic receptors (clonidine) and selective serotonin reuptake inhibitors for the treatment of affective lability, irritability, hyperactivity, inattention, aggression, self-harm, stereotypy and masturbation.<ref

name="Ošlejšková" / >

Links

Related Articles

- Autism
- Behavioral Disorders_(Paediatrics)

External links

- Child autism – Czech Wikipedia (https://cs.wikipedia.org/wiki/D%C4%9Btsk%C3%BD_autismus)
- Pervasive developmental disorder - English Wikipedia (https://en.wikipedia.org/wiki/Pervasive_developmental_disorder)

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