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THE FEATURES OF COMPLEX TREATMENT, CARE AND REHABILITATION FOR DISABLED CHILDREN SUFFERING FROM CEREBRAL PALSY IN POLAND AND SLOVAKIA

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The peculiarities of approach to organization of complex treatment, care and rehabilitation for the child patients with cerebral palsy in Poland and Slovakia were described in the article. Some problems about diagnose and etiology factors were discussed. The main model proposed by M. Gordon is used for patient's needs division according to Functional Pattern. The medical care is carried out depends on 3 group of diagnoses according to North American Nursing Diagnosis Association – International:1) problem-focused; 2) risk diagnosis and 3) health promotion diagnoses.

Ключові слова: *children, cerebral palsy, medical care*

As it is known from studies the prevalence of cerebral palsy (CP) is varied from 1-2 till 8-9 per 1000 live births in the different countries (National Center for Health Statistics in the USA; Winter et al, 2002; Paneth et al., 2006; Sadowska et al, 2020; Zhang et al, 2020). Sadowska (2020) noted that the average incidence of cerebral palsy is estimated to range between 1,5 and 3,0 per 1000 live births. Another researcher E. Streja (2013) indicated that cerebral palsy has birth prevalence of 2 per 1000 live births in Denmark and it is the most common physical developmental disability in childhood with syndrome in the country. Nevertheless, some researchers reported that the rate of prevalence of cerebral palsy was stable from period of 1950-1980, but later in period of 1980 -1990 the tendency of prevalence of CP was increasing. The specialists suggested that it was related with increased survival of very premature infants as a result of improvements in perinatal care (Zhang et al, 2020).

The purpose of research is to review the articles and reports related with study of cerebral palsy on the example of different countries and to focus on the importance of the implementation of complex treatment, care and rehabilitation for the child patients with CP.

Cerebral palsy (CP) is a group of syndromes caused by non-progressive brain injury in the fetus or infant (Zhang et al, 2020). Sadowska et al. (2020) defined cerebral palsy as "a group of permanent disorders of the development of movement and posture, causing activity limitations that are attributed to non-progressive disturbances that occurred in the developing fetal or infant brain" (Sadowska et al. 2020). But Paneth et al (2006) emphasize that cerebral palsy is a clinical diagnosis, and no single neuroimaging pattern or group of patterns fully encompass the diagnostic findings that are possible in CP.

According to opinion of different authors, the clinical presentation of cerebral palsy is varied (Paneth et al, 2006; Sadowska et al. 2020). MacLennan et al. (2019) think that CP is a neurodevelopmental disorder diagnosed on clinical signs, not etiology. This researcher develops idea, that cerebral palsy plays a role of "umbrella" and "clinical diagnosis that encompasses the diverse motor phenotypes/topographies and etiologies of this disorder" (MacLennan et al., 2019).

But it is should to take into account that there are many classifications of motor disorders related with CP exist. For example, it is known the classifications proposed by Ingram in 1955 and Hagberg in 1976 (Sadowska et al. 2020). Classification developed by Ingram describes the type of neurological syndrome and its location, severity of symptoms. According to this classification there are following clinical types: diplegia, hemiplegia, bilateral hemiplegia (tetraplegia) ataxia, dyskinesia, and mixed types. This classification is well-known and useful for practical issues.

In many previous and current reports, the possible reasons, influence of genetic causation and other risks factors were analyzed. Thus, Sadowska et al (2020) divided risk factors on four groups: 1) pre-conception (mother's systemic diseases, drugs, malnutrition, physical and chemical factors, etc.); 2) prenatal (vaginal bleeding, placental abruption, multiple pregnancy, toxaemia);

3) perinatal (premature birth, C-section, delivery after due data, prolonged labour or its induction, asphyxia); 4) neonatal and infant period (artificial respiratory support, respiratory distress syndrome, infections, meningitis, etc.).

The group of researchers from the USA investigated the association between maternal self-reported infections, fever, and smoking in the prenatal period and the subsequent risk for congenital cerebral palsy (E. Streja et al, 2013). They argued fact that maternal vaginal infection, maternal fever, and maternal smoking, during first half period of pregnancy are associated with increased risks of CP in the child (E. Streja et al, 2013). The international group of researchers from China and Sweden provided our meta-analysis of the different studies and reports and show that birth asphyxia is associated with CP in children (Zhang, 2020).

MacLennan et al. (2019) argued that "the clinical diagnosis of cerebral palsy covers all causes", they thought that identifying genetic etiologies or any other specific etiology should not change the clinical diagnosis of cerebral palsy.

Thus, it is clear that the study of CP refers to numerous discussions and should be one of the important directions in research for child neurology.

It is should be noted that cerebral palsy is one of the most common causes of disability among children in Poland and Slovakia (Balcerzak-Paradowska et al, 2002; Hanzlíková, 2006). Thus, cerebral palsy therapy is one of the main challenges in pediatric neurology. According to the case of patient the classic or innovative methods of treatment can be chosen, in some cases the surgical operation may be recommended (Krukowska-Andrzejczyk et al, 2019; Masgutova, 2019; Sadowska et al 2020). Nevertheless, one of the important roles in the complex treatment of cerebral palsy is belonged to the modern care for such patients and implementation of the special programs for their rehabilitation (Kyschenko et al, 2018). In the Center of Pediatrics named after John Paul II the modern medical equipment for the rehabilitation of the children with CP is installed and the nursing staff and specialists in physiotherapy, psychology, and other directions maintain complex care.

For the implementation of complex care, it is important to follow approach of whole person assessment proposed by M. Gordon. She developed model for assessment of 11 Functional Health Patterns, such as: 1. Health perception – health management; 2. Nutrition – metabolic; 3. Elimination; 4. Activity – exercise; 5. Sleep – rest; 6. Cognitive – perceptual; 7. Self-perception – self-concept; 8. Coping – stress tolerance; 9. Role – relationship; 10. Sexuality – reproduction and 11. Value – belief (Žiakova, 2009). Such model includes initial and on-going screening and the systematic process avoids the temptation to jump to interventions based on perceived experience without exploring other potential issues. In this approach of care nurses focused on safety and the identification of risks other than the presenting risk. But the process does not eliminate the need for a judgement to be made about appropriate timing for a full assessment. Nevertheless, in this approach more opportunities for the patient focused care, not only professional boundary focused.

In addition, the nursing staff defined nursing diagnosis according to 3 types of diagnosis: 1) Problem-focused (example, acute pain); 2) Risk diagnosis (example, risk for constipation) and 3) Health promotion diagnoses (example, Readiness for enhanced breast feeding for newborns). These diagnoses are coded and classified in North American Nursing Diagnosis Association – International (NANDA-I) and it helps to increase the quality and efficiency of nursing care (Žiakova, 2009), because the nursing process is implemented as important part of treatment, care and rehabilitation of the patients with cerebral palsy.

CONCLUSION

For the efficiency of treatment and rehabilitation of these patients it is important the complex social, psychological and financial support of them and their families, as well the permanent education of the parents of children patients with CP in the point of special life style for them, using opportunities to have special programs of primary, secondary and tertiary education, social involvement of such children into the society and labor market.

The experience of the complex treatment, care and rehabilitation of the child patients with cerebral palsy in Poland and Slovakia plays a very important role in the increasing efficiency of medical and social centers for disabled child patients in Ukraine. It is necessary to support team work, holistic approach for the patient's needs based on the health patterns proposed by M. Gordon and community nursing in practice in medical and social centers for disabled child patients in Ukraine.

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