UDC: 616.89-053.2-085.851:612.017+616.12-007.1-053.2-089-06

**SPECIFICITY OF MEDICAL AND PSYCHOLOGICAL ASSISSTANCE TO PATIENTS WITH CONGENITAL HEART DISEASE**

Scientific and Practical Medical Centre of Pediatric Cardiology and Cardiosurgery of Ministry of Health of Ukraine

Ukraine, Kyiv

***Kasianova A.Yu.***

Congenital heart disease in children is described within the period from psychosocial peculiarities of prenatal ultrasound diagnosis to the life of adults. Psychosomatic conditions and psychosocial characteristics of children and youth with congenital heart defect and parents are presented in the article from biopsychosocial perspective. The role of a psychologist and multidisciplinary approach in providing medical and psychological care to patients are featured in the article.

**Key words:** congenital heart disease, children, psychological assistance.

Current level of medicine allows identifying the congenital heart disease (CHD) at the prenatal stage already but the complex of medical and psychological system of CHD children and adults follow up has not existed until now. Taking into account the need of surgical treatment, possible complications at the stage of pregnancy and physical and social limitations within the adulthood, the researchers are focusing on psychosocial specificity of CHD patients [1].

The **aim** of the research is to increase the effectiveness of medical and psychological help to children with CHD surgical correction through the assessment of psychomotor development follow up and to the development of the programme of individual medical and psychological follow up.

**Material and methods.** On the base of “Scientific and practical medical centre of pediatric cardiology and cardiosurgery of Ministry of healthcare of Ukraine” 104 children from 1 to 3,5 years of age diagnosed with transposition of great arteries and who have undergone arterial switch operation at a newly born age and had a psychological examination by medical psychologist in follow up period. After psychological examination children with delayed psychomotor development were divided into two groups, namely, the main group of children (n=20) and mothers who besides routine cardiac examination every six months was examined by psychologist and received recommendations for early psychological intervention at home and a comparison group of children (n=21) who was examined by cardiologist and psychologist. Mothers of comparison group were provided recommendations to improve child development but at the same time, they didn’t get homework on early psychological intervention. "The Bayley Scales of infant and toddler development" (BSID-II) has been used to study psychomotor development follow up of children with CHD. In order to develop an individual plan for medical and psychological support we used the method of Glenn Doman early intervention [2]. This technique is based on the stimulation of the central nervous system of the child through touch, visual and auditory perception .

**Results and discussion.** 41 (39,42%) persons of 104 children with СHD had a mental (MDI) and/or psychomotor (PDI) development indices 84 points and lower, which indicated development delay. Average mean of MDI was 92,74 + 14,57, PDI was 88,98 + 15,07. MDI, PDI of main, and comparison group presented in Table 1

*Table 1.*

**The evolution of mental and psychomotor development of children with CHD with and without medical and psychological support**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Indices of mental and psychomotor development | The main group  (n=20) | | The comparison group  (n=21) | |
| At the age of 1 – 1,5 years | At the age of 2,5 – 3,5 years | At the age of 1 – 1,5 years | At the age of 2,5 – 3,5 years |
| MDI | 77,53+6,63 | 113,24+10,64\* | 79,45+5,42 | 90+11,25\* |
| PDI | 69,58+8,34 | 97,93+8,92\* | 70,95+9,42 | 86+6,59\* |

\* - p <0,01, for the U Mann-Whitney test.

Thus, the results of the study showed that about 40% of children through their mental and/or psychomotor development delay need an early psychological intervention. Despite the small study group the implementation of medical and psychological assistance in the early stages of children contributed to their normal development within their age period.

According to our preliminary data about a third of children with delayed mental and/or psychomotor development requires a program of early psychosocial care [3]. Early psychological diagnostics cognitive and motor skills of children with СHD helps identify children with developmental delays. Whereas, according to opinion of many scientists the first three years of life is the best time for psychotherapeutic interventions [2,4]. The program of psychodiagnostic and psychotherapeutic interventions which were developed in this study emphasized the importance and effectiveness of comprehensive medical and psychological support of children with CHD.

**Conclusion.**

1. About 40% of children with CHD needs an early psychological intervention through the delay of mental and/or psychomotor development.
2. "The Bayley Scales of Infant and Toddler Development" is effective in the study of psychomotor development follow up of children after CHD surgical correction and can be used for children examination under the age of 3.5 years.
3. Statistically significant results in the group of children who received comprehensive medical and psychological assistance have shown the effectiveness of early psychological intervention by G. Doman method and stressed the need for greater and active dissemination of comprehensive medical and psychological support.

**References**

1. Latal B. Psychological adjustment and quality of life in children and adolescents following open-heart surgery for congenital heart disease: a systematic review. / B. Latal, S. Helfricht, J. E. Fischer, U. Bauersfeld, M. A. Landolt / BMC Pediatr. 2009., P. 6 – 9.
2. Доман Г. Как сделать свого ребенка физически совершенным. От рождения до 6 лет / Г. Доман, Д. Доман, Б. Хаги // Медиакит. – 2013. 264 с.
3. Касьянова А. Ю. Віддалений психомоторний розвиток дітей з вродженими вадами серця при операціях зі штучним кровообігом та застосуванням аутологічної пуповинної крові / А. Ю. Касьянова, В. А. Жовнір, О. М. Федевич, К. С. Часовський, І. М. Ємець // Современная педиатрия. – 2013. №4 (52), С. 135 – 137.
4. Snookes S. A systematic review of motor and cognitive outcomes after early surgery for congenital heart disease / S. H. Snookes, J. K. Gunn, B. J. Eldridge, S. M. Donath, R. W. Hunt, M. P. Galea, L. Shekerdemian // Pediatrics. – 2010. Vol.125, № 4, P. 818 – 827.