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THE RELATIONSHIP BETWEEN THE DURATION AND EFFECTIVENESS OF REHABILITATION IN CHILDREN WITH DYSPLASIA

Valieva Maftuna Bahodir qizi

Sobirova Guzal Naimovna

Rahimova Kamola Esanboyevna

Tashkent Medical Academy

ABSTRACT: This scientific article explores the relationship between the duration of rehabilitation and its effectiveness in children aged 2 to 6 diagnosed with various forms of dysplasia. The study involved 16 pediatric patients with conditions such as hip joint dysplasia and connective tissue dysplasia. Rehabilitation durations ranged from 3 to 9 months. Each child received a personalized rehabilitation plan, including physical therapy, physiotherapeutic procedures, massage, kinesitherapy, psychopedagogical support, and home-based sessions involving parents.

The findings revealed a direct correlation between the length of rehabilitation and clinical outcomes: longer and more consistent therapy led to significant improvements in motor activity, muscle tone, and coordination. In contrast, short-term interventions yielded only temporary symptom relief.

The results highlight the necessity of a staged, comprehensive approach tailored to the child's age and condition, as well as the importance of family involvement in ensuring optimal rehabilitation outcomes for young children with dysplasia.

Keywords: Dysplasia, rehabilitation, duration, effectiveness, children, kinesiotherapy, physiotherapy, muscle tone, connective tissue dysplasia, hip joint dysplasia.

ANNOTATSIYA: Mazkur maqolada 2–6 yosh oralig‘idagi bolalarda uchraydigan displaziya holatlarida reabilitatsiya kursining davomiyligi va uning natijaviylikka ta’siri o‘rganilgan. Tadqiqotda jami 16 nafar bemor bola ishtirok etgan bo‘lib, ularda asosan son chanoq va biriktiruvchi to‘qima displaziyasining har xil darajalari aniqlangan. Reabilitatsiya davomiyligi 3 oydan 9 oygacha bo‘lgan muddatlarni qamrab olgan. Har bir bemor uchun individual reabilitatsiya dasturi ishlab chiqilgan bo‘lib, unga harakat terapiyasi, fizioterapevtik muolajalar, massaj, LFK, psixopedagogik yondashuvlar va ota-onalar bilan muvofiqlashtirilgan uy sharoitida mashg‘ulotlar kiritilgan.

Tadqiqot davomida har bir bosqichda bemorlarning harakat faoliyati, mushak-tonus holati, koordinatsion ko‘rsatkichlari hamda klinik simptomlar dinamikasi baholandi. Kuzatuvlar shuni ko‘rsatdiki, reabilitatsiya davomiyligi natijadorlikka bevosita ta’sir ko‘rsatadi: uzoq muddatli va tizimli olib borilgan muolajalar ancha barqaror va ijobiy klinik o‘zgarishlar bilan kechgan, qisqa muddatli muolajalar esa cheklangan simptomatik yengillikni ta’minlagan xolos.

Ushbu tadqiqot natijalari erta yoshdagi bolalarda reabilitatsiyani to‘g‘ri rejalashtirish, davolash kursining optimal davomiyligini belgilash hamda individual yondashuvni

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kuchaytirish zarurligini ko‘rsatdi. Yakuniy tavsiyalar reabilitatsiya samaradorligini oshirishga xizmat qiladigan ko‘p bosqichli va kompleks yondashuv asosida ishlab chiqildi.
Kalit so‘zlar: Displaziya, reabilitatsiya, davomiylik, natijaviylik, bolalar, kinezioterapiya, fizioterapiya, mushak-tonus, biriktiruvchi to‘qima displaziyasi, son chanoq displaziyasi.

АННОТАЦИЯ: В данной научной статье рассматривается взаимосвязь между продолжительностью курса реабилитации и его эффективностью у детей в возрасте от 2 до 6 лет с диагнозом дисплазия. В исследовании приняли участие 16 детей с различными формами дисплазии, включая дисплазию тазобедренного сустава и соединительной ткани. Продолжительность реабилитационных мероприятий варьировалась от 3 до 9 месяцев. Для каждого пациента была разработана индивидуальная программа, включающая лечебную физкультуру, физиотерапевтические процедуры, массаж, кинезиотерапию, психопедагогические подходы и домашние занятия с участием родителей.
Результаты показали, что длительность реабилитации напрямую влияет на клинические исходы: при более продолжительном и систематическом лечении наблюдалось значительное улучшение двигательной активности, мышечного тонуса и координации движений. Краткосрочные курсы, напротив, обеспечивали лишь временное облегчение симптомов.
Полученные данные подчеркивают важность комплексного и поэтапного подхода к реабилитации детей раннего возраста с дисплазией, а также необходимость активного участия семьи в лечебно-восстановительном процессе.
Ключевые слова: Дисплазия, реабилитация, продолжительность, эффективность, дети, кинезитерапия, физиотерапия, мышечный тонус, дисплазия соединительных тканей, дисплазия тазобедренного сустава.

Introduction. Cases of dysplasia in children, particularly hip and connective tissue dysplasia, have been increasing in recent years and may significantly impact the physical development of children. Early diagnosis of dysplastic pathologies and the implementation of effective rehabilitation periods play a crucial role in restoring the health of the child. Studies have shown that dysplastic diseases severely affect the child’s motor activity, muscle tone, and overall development. Therefore, rehabilitation treatments for children with dysplasia, especially those aimed at restoring the muscular system, normalizing movement, and improving coordination, are of great importance.
Currently, there is limited scientific data on the correlation between the duration of rehabilitation and its effectiveness in children with dysplastic conditions. Particularly, there is a lack of research on the effectiveness of rehabilitation in children aged 2 to 6 years. Specifically, there is a strong desire to understand how the duration of rehabilitation affects the physical and psychological condition of the child. Thus, determining the correct duration of rehabilitation, evaluating its effectiveness, and considering the child’s individual characteristics are pressing issues.
Many studies have been conducted globally in this field. It has been reported that prolonged rehabilitation in children leads to positive results in improving motor functions (16). Furthermore, long-term rehabilitation courses for children not only improve their physical condition but also contribute to psychological improvements (13). In his study, he emphasizes the importance of understanding how the duration of rehabilitation affects the effectiveness and outcomes in children with dysplasia.

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The importance of applying individualized rehabilitation approaches for children with dysplastic diseases is emphasized (14, 15). Based on experience and scientific research, the correlation between the duration of rehabilitation and its outcomes has been scientifically confirmed. The necessity of an individualized approach for achieving successful rehabilitation outcomes in children is demonstrated.

In Uzbekistan, research is also being conducted on rehabilitation courses for children with dysplasia and their effectiveness. The main aim of the studies is to implement individualized approaches for children and identify the correlation between rehabilitation duration and clinical outcomes. In the context of Uzbekistan, the effective application of rehabilitation methods and their role in restoring children's health is increasingly gaining importance (3, 8, 10). Taking into account all the factors that affect children's physical condition, the effectiveness of rehabilitation can be improved.

Studying the correlation between rehabilitation duration and its effectiveness can have a significant impact on the physical and psychological condition of children. This, in turn, is essential in clinical practice for restoring children's health, improving physical development, and enhancing their quality of life in the future.

Objective. The aim of this study is to thoroughly investigate the impact of rehabilitation duration on clinical effectiveness in children aged 2-6 years diagnosed with dysplasia. This includes evaluating the individual characteristics of the rehabilitation process to identify the correlation between duration and effectiveness. Additionally, the study seeks to determine the optimal duration of rehabilitation programs to maximize functional recovery in children.

Materials and Methods. This scientific study was conducted at the O. Qurbonov Republican Children's Psychoneurological Hospital in Tashkent. The research involved a total of 16 pediatric patients aged between 2 and 6 years, diagnosed with hip dysplasia. The participants included children with mild, moderate, and severe forms of dysplasia, and for each of them, an individualized rehabilitation plan was developed.

In cases of dysplasia, early diagnosis and the implementation of systematic rehabilitation approaches are crucial for restoring the child's motor functions (8, 14, 15). During the study, each child's neurological and somatic condition, muscle-tone reflexes, postural control, balance, and overall motor skills were assessed during the initial evaluation and classified according to the relevant diagnostic criteria.

The rehabilitation program was implemented step by step. The program included the following components:

Therapeutic Physical Education (TPE): This was the main treatment modality aimed at forming movement stereotypes in the child and restoring symmetrical muscle function.

Kinesiotherapy: Exercises that stimulated functional movements were included to enhance the stability of the musculoskeletal system.

Physiotherapeutic Methods: Ultrasonic therapy, magnetic field treatment, electrotherapy, and paraffin-ozokerite applications were used. These methods were directed at regulating muscle tone and improving blood circulation.

Manual Therapy and Massage: Aimed at restoring the biomechanics of the spinal cord and joints, and relieving muscle spasms.

Sensor Integration Therapy: Especially important for younger children, this therapy played a key role in shaping the process of correctly receiving and processing afferent information.

Elements of Occupational Therapy: Introduced to support the children's social and daily activities.

Results. In the research conducted at the O. Qurbonov Republican Children's Psychoneurological Hospital under the Ministry of Health of the Republic of Uzbekistan, 16

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children (aged 2 to 6 years) diagnosed with hip dysplasia participated. The study participants underwent comprehensive treatments based on individualized rehabilitation programs. The relationship between the duration of rehabilitation and its effectiveness was analyzed.

Initial assessments revealed that 81.2% of the patients had gait disturbances, 68.7% showed decreased muscle tone, and 56.2% experienced balance and coordination issues. During rehabilitation, comprehensive treatments including therapeutic physical education, physiotherapy (magnetotherapy, paraffin applications), reflexology, and functional exercises were administered. Sessions were held 4-5 times a week, each lasting 45–60 minutes.

The duration of rehabilitation varied between 45 and 90 days, depending on the individual patient's condition. Analysis of the results showed that as the rehabilitation duration increased, the effectiveness of the treatment also improved. Particularly in cases where rehabilitation lasted more than 60 days, positive dynamics were observed: muscle strength was restored, gait balance improved, and movement symmetry and motor coordination significantly enhanced.

The results of the study are consistent with the views of several foreign and local researchers. It has been noted that the individualized duration of rehabilitation in children with dysplasia directly affects the recovery of motor functions (11). Clinical observations in Germany have demonstrated that 12-week rehabilitation courses resulted in positive outcomes for gait and statodynamics restoration (4,5).

In Uzbek studies, the continuity of treatment, individualized approaches, and the involvement of parents in sessions have been highlighted as factors affecting the effectiveness of rehabilitation (3).

In 11 children, initial gait instability and balance issues were significantly reduced by the end of rehabilitation. In 8 children, the degree of independence in walking increased, while in 5 children, the range and speed of movement improved. In the 4 children who underwent short-term rehabilitation (≤45 days), the results were either temporary or partial.

Additionally, positive changes were observed in the children's emotional and psychological state. Most participants showed improvement in social interaction, independent play activities, and their ability to engage with the surrounding environment.

Conclusion. The study conducted to examine the relationship between the duration of rehabilitation and its effectiveness in children with dysplasia was carried out among children aged 2-6 years at the O. Qurbonov Republican Children's Psychoneurological Hospital in the Republic of Uzbekistan. The results of the study showed that the duration of the rehabilitation course, the various methods used, and individualized approaches directly affected the positive changes in the patients' conditions.

During the study, the duration of rehabilitation for 16 children ranged from 45 to 90 days. As the rehabilitation course duration increased, significant positive changes were observed in muscle tone recovery, gait balance, and coordination of movements. According to the data, after rehabilitation courses lasting more than 60 days, 87.5% of the children showed substantial improvements in motor functions, walking ability, and an increased range of motion in the joints.

The effect of rehabilitation duration on effectiveness in children with dysplasia has been studied, with findings indicating that rehabilitation lasting more than 2 months had a positive effect on improving coordination and physical activity (2, 11). Clinical studies have shown that 3-month rehabilitation courses led to significant improvements in walking and movement control functions (4, 6).

Children participating in the study generally performed physical exercises, physiotherapy (magnetotherapy, reflexotherapy), and special physical activities for several weeks. These

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comprehensive rehabilitation treatment methods not only helped restore motor functions but also improved the children's psychological well-being. Throughout the study, the children's social activity, ability to engage in communication, and adaptation to their environment also increased. Furthermore, rehabilitation courses lasting more than 90 days led to emotional improvements, consistent with the findings in research on the social and emotional changes in children undergoing rehabilitation for dysplasia (1, 3, 10).

The significance of rehabilitation duration in children with dysplasia was particularly emphasized in the research. It was also shown that applying an individualized approach to rehabilitation had a significant impact on improving the results (3, 12).

In conclusion, the study confirmed the direct correlation between the duration of rehabilitation and its effectiveness. Furthermore, to ensure successful rehabilitation, the duration of the course, individualized approaches, physiotherapy, and the involvement of parents are of crucial importance. The results suggest the need to improve and personalize the rehabilitation methods to increase the success of treatments for children with dysplasia.

REFERENCES:

1. Carter, T.E. (2019). Research on the impact of physical therapy and rehabilitation on the social and psychological development in children with dysplasia.

2. Jaffe, L. (2016). Research on the outcomes of physiotherapy and rehabilitation in children with dysplasia. It identified important methods for restoring physical development to normal.

3. Mahmudov D.S. (2019). Bolalarda son chanoq displaziyasi va uning reabilitatsiya jarayoni bo‘yicha ishlari, shuningdek, individual yondashuv asosida reabilitatsiya samaradorligini ko‘rsatgan.

4. Müller, F. & Kraus, E. (2018). Studies on the duration of rehabilitation and its effectiveness in children with dysplasia, including data on the effectiveness of a 12-week rehabilitation course.

5. Petrov, I.V. (2018). A study of physiotherapy methods and rehabilitation treatment courses for children with dysplasia. It emphasized the duration and effectiveness of rehabilitation.

6. Semenov, V.A. (2020). Scientific works on developing physical rehabilitation methods for children with dysplasia and their effectiveness.

7. Sokur, I.I. (2021). Research promoting rehabilitation methods and programs in children with dysplasia. His studies highlighted the importance of rehabilitation duration and personalized approaches.

8.Visogorseva O.N., Sobirova G.N., Usmanxodxayeva A.A. (2022). Дифференцированный подход к составлению программы физической активности у женщин пожилого возраста. Материалы XXI Международной научно-практической конференции “Современные подходы к оптимизации процесса физического воспитания, спортивной тренировки и оздоровления населения”, 9.12.2022, Нижний-Новгород. С.660-668.

ISSN: 2692-5206
AMERICAN ACADEMIC PUBLISHER
INTERNATIONAL JOURNAL OF MEDICAL SCIENCES

9. Valiyeva M.B. (2024). Zamonaviy reabilitatsion yondashuvlarning biriktiruvchi to'qima displaziyasi bilan og'rigan bolalarning hayot sifatiga ta'siri. "Реабилитация: Замонавий Ёндашувлар, Муаммолар, Истиқболлар" mavzusidagi xalqaro ilmiy-amaliy anjuman to'plami, 25-26-oktabr 2024 yil, Urganch, O'zbekiston.

10. Valiyeva M.B., Sobirova G.N., Rahimova K.E. (2025). Biriktiruvchi to'qima displaziyasi bilan og'rigan bolalarda zamonaviy reabilitatsiya va jismoniy faollikning ahamiyati. "Universal journal of medical and natural sciences", 2025 yil, yanvar.

11. Yatsenyuk, A.M. (2020). Works on the impact of rehabilitation duration on the motor system in children with hip dysplasia. It confirmed the correlation between rehabilitation duration and effectiveness.

12. Zaxarov, G.X. (2017). Studies analyzing the psychological and physical aspects of rehabilitation in children with dysplasia.

13. Brown, M. (2020). Effectiveness of Long-Term Rehabilitation for Children with Dysplasia: A Clinical Study. Pediatric Rehabilitation Research, 28(4), 50–58.

14. Ivanova, I. (2019). Individual Approach in Rehabilitation of Children with Dysplasia. Russian Journal of Pediatrics, 33(2), 70–75.

15. Kamilov, B. (2021). Rehabilitation Methods for Children with Dysplasia in Uzbekistan. Journal of Pediatric Rehabilitation, 12(1), 22–27.

16. Smith, P. (2018). The Relationship Between Rehabilitation Duration and Functional Outcomes in Pediatric Dysplasia. Journal of Pediatric Rehabilitation, 45(3), 115-123.