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RESULTS OF CONSERVATIVE TREATMENT OF CONGENITAL HIP DISLOCATION IN INFANTS

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Abstract
When analyzing the follow-up results of conservative treatment of 84 children with congenital hip dislocation, the highest percentage of satisfactory results (15.4%) and complications (1.2%) was different in patients treated with the Sheptun-Ter-Egnazarov method, taking this into account, the authors have developed an orthopedic abduction splint allowing atraumatic elimination of dislocation of the hip and maintaining movement in the joints during treatment, ensuring movements contributed to the centering of the femoral head in the cavity, which reduced the risk of developing degenerative processes in the joint.
When using the proposed orthopedic splint in children from 4 to 12 months in combination with physiotherapy, excellent and good follow-up results were obtained in 7.1 78.6% of cases.

Keywords: children, hip joint, conservative treatment, physiotherapy.

Introduction

Dysplasia of the hip joint and congenital dislocation, despite the use of today's modern examination and treatment methods, are increasing day by day and remain one of the urgent problems of children's orthopedics.

Today, specialists pay great attention to early diagnosis and functional treatment of hip dysplasia and congenital malformation (5). Because such an approach provides an opportunity to improve the results of bloodless treatment and reduce the need for surgical treatment (4,5).

Congenital dislocation of the thigh is a severe form of hip dysplasia, which requires the cooperation of pediatric orthopedists, neonatologists, obstetricians and pediatricians for early detection, treatment and rehabilitation. At the same time, such measures provide an opportunity to reduce the percentage of various complications observed in the hip-femoral joint (such as residual dislocations, hypoplasia, acetabular dysplasia, dysplastic coxoarthrosis in teenagers, biomechanical disorders) (5,6).

If each specialist carries out the rehabilitation process step by step correctly, sparingly and regularly in a complex method, it will improve the results of functional treatment, correct various complications and deformations that develop during the growth of the hip joint, and reduce the indications for surgical correction (4,6).

However, the lack of qualified children's orthopedists in maternity hospitals leads to late diagnosis of the disease and the occurrence of various residual complications (48.8-62.6%) in the hip joint after a long period of treatment (5,6).

This situation, in turn, makes it necessary to develop more effective methods of the existing functional treatment methods.

The purpose of the work: to improve functional methods of treatment of congenital hip dislocation in children of breast age, increase efficiency and improve treatment results.

Materials and methods of examination: examination and treatment were carried out at the Samarkand branch of the Republican Specialized Traumatology and Orthopedics Scientific and Practical Medical Center.

In the implementation of the planned tasks, the results of the treatment of 84 children aged from one month to 18 months, who were treated with congenital dislocation of the hip during the years 2022-2023, were taken as a basis.

63 (75%) of the children were girls and 21 (25%) were boys.

24 of the patients (28.6%) were treated with congenital hip dislocation in their offspring. 67 of them (80%) were born with the head, 9 (10.7%) were born with the buttocks, and 8 (9.3%) had a caesarean section.

All treated patients were divided into three groups. The first group consisted of children aged from one week to four months, and today's popular Freika tire (Andijon "Macon Mirza" company) was used. Freika splint was used for 4 months in children up to one month old, 5-6 months in 2-3 month old children, and during the next 3-4 months it was transferred to Wilensky splint. 16 patients were observed in this method (table-1).

44 patients (52.4%) aged 4 to 12 months were treated with the orthopedic splint proposed by the authors.

After the diagnosis was established, the patients were given the proposed functional splint (Stretch for the treatment of congenital hip dislocation and hip dysplasia in children. Utility model patent UZ FAP 01285. 2018, Tashkent).

During the preparatory period, the sick children are recommended massage, physical exercises, physiotherapeutic (paraffin, or ozokerite, electrophoresis with calcium chloride, potassium iodide solution from session No. 10) procedures, after getting their legs used to the "frog position", the device is used (photo-1). A functional orthopedic splint looks like a jumpsuit and is equipped with special straps. The straps go over both shoulders and are attached to the jumpsuit at the front and back with snaps. The lower part of the overalls has a special pocket for the separator, which is attached to the overalls.

The separator is provided with a cushion with a spring inside and hooks on both sides for holding. A spring cushion placed between the legs allows the child to gradually move the legs away from the hip regularly without pain. At the same time, he holds the head of the femur straight to the casting cup.

^{0} bent from the hip and knee, freely, as much as it can be stretched without using force. Then, for a week or two, the straps are gradually pulled and the thighs are stretched and transferred to the "frog position". During this period, it is forbidden to remove the device from the child or bathe it. (Image-1-A, B.)

the thigh is bent 75-85 $^{\circ}$ and stretched 80-85 $^{\circ}$, the head of the thigh is aligned with the pelvis. The device is used for 6-8 months until the functional movement is normalized in the hip-femoral joint, and for 5-6 months when the birthmark is half-expanded.

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In order to stimulate metabolism in the body during the fixation period, electrophoresis #10-12 sessions with calcium chloride solution, biostimulants and group V vitamins are recommended. Aloe from biostimulants 1 g. for 20 days from; thiamine chloride in tablet form 0.002 g. from 2 times a day for 1 month; cyanocobalamin was administered by injection at 200 mg per day for 1 month.

In order to prevent the development of aseptic necrosis in the femoral head, electrophoresis with trental solution in the lumbar area is recommended (10 sessions).

Electrophoresis with nicotinic acid, trental or cavinton is recommended if the ossification of the femoral epiphysis core is slowly forming on the X-ray image.

Ter-Egiazarov-Sheptun plaster bandage was used in 24 children whose disease was detected late at 12-18 months.

The duration of fixation in the plaster bandage was 3-4 months, and then it was continued for 7-8 months in the Vilensky splint.

Orthopedic treatment and rehabilitation treatments (massage, therapeutic gymnastic exercises, physiotherapeutic treatments) are used regularly according to instructions, and free movement is allowed after 11-12 months.

Treatment results and discussion.

The treatment results were evaluated and analyzed from 12 months to 36 months (average 24 months) after the child started to walk independently.

In evaluating the results of the treatment, the patient's complaint, the amount of active movement in the joints, and the process of independent walking were evaluated. The acetabular angle, torsion angle, Viberg's angle and the proportion of the joint, i.e. the shape of the femoral head and the condition of the femoral cup, were evaluated from radiological indicators.

Each sign was evaluated with a score of 5 (moderate), 4 (clinically moderate, radiographically not completely moderate), 3 (clinically and radiographically with mild disease symptoms) and 2 (clinically and radiologically with symptoms of disease complications). The accumulated total points are divided by the number of all characters. The average evaluation of the obtained clinical and radiological results provides an opportunity to objectively evaluate the effectiveness of treatment.

Of the 84 patients who underwent treatment, 6 (7.1%) had excellent results, 60 (71.5%) had good results, 17 (20.2%) had satisfactory results, and 1 (1.2%) had unsatisfactory results (table-2).

As can be seen from the table, excellent results were observed in patients treated with the Freika pad (2.4%) and the proposed orthopedic splint (4.7%).

Good results were observed in 13 of 16 patients (15.5%) with Freyka splint, 37 of 44 patients (44%) with orthopedic splint, and 10 of 24 patients (12%) with Sheptun-Ter-Egiazarov plaster bandage. Satisfactory results were observed in 1 (1.2%) patients using a Freika splint, 3 (3.6%) patients using an orthopedic splint, and 13 (15.4%) patients using a plaster cast. Unsatisfactory results were also observed in 1 (1.2%) patient with a plaster bandage, and surgical treatment was recommended.

Here are some examples of treated patients:

Patient: Omonova H., 4 months old. Ambulatory card #160

A. X-ray on request. Sonlarni's birthday, 21.12.2021.

B. X-ray image of this patient in an orthopedic splint, 06.02.2022.

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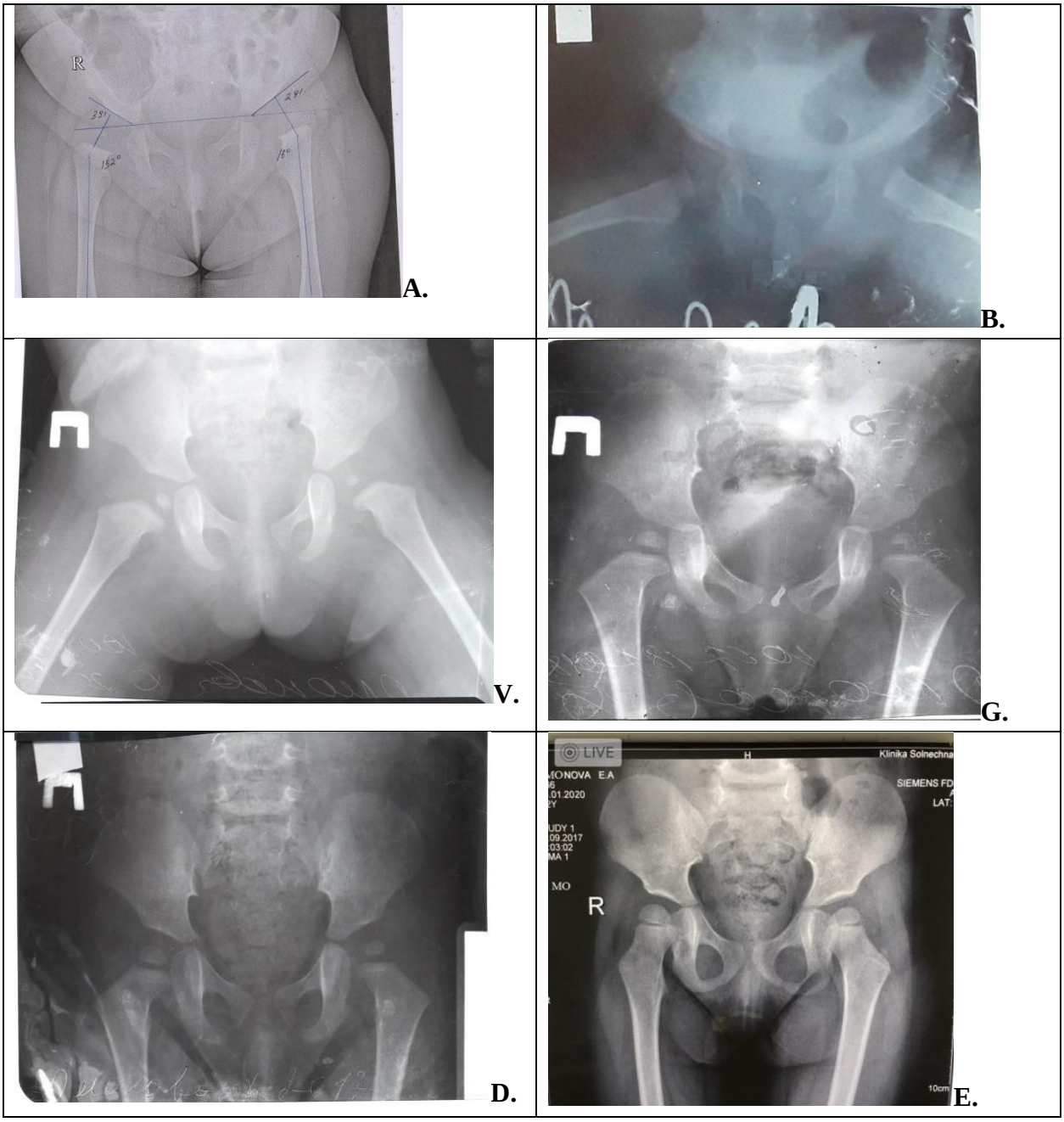
V. X-ray image of this patient after 9 months, 09.09.20 22 .
G. X-ray image of this patient after 12 months, 10.12.20 22 .
D. X-ray image of this patient after 15 months, 15.03.20 23 .
E. X-ray image of this patient after 2 years, 31.01.20. 24.



The results of the treatment were relatively the same in boys and girls, and satisfactory results were observed only in patients with congenital orthopedic diseases.

In these patients, the slow development of the femoral head and femur and dystrophic processes (aseptic necrosis) were observed more often. In order to improve the blood circulation, physiotherapeutic (paraffin), electrophoresis (group B vitamins, ascorbyn, nicotinic acids, trental) treatments are used to stimulate the blood circulation and metabolism in these areas.

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Also, the rational use of therapeutic exercises has a positive effect on the recovery of the joint components, improving the tone of the hip abductor muscles.

Conclusions

The functional orthopedic splint offered by the authors is easy to use, compact and effective, allowing for gradual pain-free adjustment of the femoral head and keeping it in the necessary position. Also, passive and active movements in the joints, having a positive effect on the rapid development of bone tissue, eliminate the development of complications and create an opportunity to increase the share of good results.

The rational use of physical rehabilitation (physiotherapy and physical exercises) plays a positive role in the harmonious development of joints.

Distribution of patients according to treatment methods. Table-1

Conservative treatment methods					
Freika tire		Orthopedic tire		Sheptun Ter-Egnazarov	
Sony	%	Sony	%	Sony	%
16	19	44	52.4	24	28.6

Treatment results according to the treatment methods used. Table-2.

Treatment methods	**Excellent result**		**Good result**		**Satisfactory result**		**Unsatisfactory result**	
	Number	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
Freika tire	2	2.4	13	15.5	1	1.2		
Orthopedic splint	4	4.7	37	44	3	3.6		
Sheptun-Ter-Yegnazarov plaster connection			10	12	13	15.4	1	1,2
Total	6	7.1	60	71.5	17	20.2	1	1,2

A. B.

Figure-1. A- Schematic illustration. B. Tire in used condition.

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