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THE EFFECTIVENESS OF COMPLEX TREATMENT OF DYSPLASTIC COXARTHROSIS.

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Relevance. Currently, dysplastic coxarthrosis firmly occupies the second place in the structure of degenerative-dystrophic diseases of the hip joint[1,3]. The incidence of pathology according to various data ranges from 25 % to 77 %. Dysplastic coxarthrosis (DCA) is one of the most severe consequences of hip diseases such as dysplasia, congenital hip dislocation, Legg-Calve-Perthes disease, coxa-vara, etc. According to the literature, degenerative processes in the hip joints lead to a decrease in the working capacity of patients in 60-70% of cases, and to their disability-in 11-38%, and these indicators have acquired a steady upward trend in recent years [4,5].

At the moment, the main method of treatment of pathology is recognized as total endoprosthesis, which allows to relieve patients from severe pain syndrome in the shortest possible time and improve their social adaptation [6]. However, an important point of endoprosthesis is that the pathological anatomical relationships in dysplastic coxarthrosis require a differentiated approach to the implantation of endoprosthesis components [4,6,7,8].

When hip arthroplasty, despite improvements in technology surgery, quality materials for the manufacture of implants and their design, frequency of aseptic instability of the prosthesis is quite high.

The purpose of the study.

The aim of the study was to improve the effectiveness of total hip replacement in patients with dysplastic coxarthrosis using complex measures.

Material and methods of research.

For dysplastic coxarthrosis in our center from 2011 to 2020, we performed primary endoprosthesis in 274 patients, including 92 (24.4%) men, 182 (75.6%) women. By age, the patients were distributed as follows: up to 30 years -28 patients, 31-50 years -67 patients, 51-60 years-85 patients, 61-70 years-90 patients, over 70 years-4. The method of examination of patients with hip joint damage includes a set of methods: clinical, X-ray, functional, laboratory, densitometric, biomechanical, computed tomography.

The purpose of these studies is to determine the stage of dysplastic coxarthrosis, choose the optimal treatment method, preoperative planning and performing the operation with subsequent restoration of the function of the operated limb.

During the operation, the main difficulty was made by patients with dysplastic coxarthrosis of the III-IV degree and, at the same time, significant efforts were required to lower the hip. In our center, a new spoke-rod device for hip reduction was developed and used in 19 patients. The task of preoperative relegation is to increase the effectiveness of correction of hip deformities in cases of severe congenital hip dysplasia with complete hip dislocation and significant upward displacement. Used by spokes Ilizarov for being relegated hips and prevent traction injury of the sciatic nerve and blood vessels, decreased trauma surgery formed the hip capsule and restore joint function with the corresponding change in the length of the limbs, so the shortening of rehabilitation.

Technique of the operation: On the operating table, the patient was laid on his side. After treatment of the surgical field, three crossed spokes with solders were carried out in the direction through the upper anterior iliac spine and along the posterior part of the iliac wing.

A 3 cm skin incision was made in the direction of the anterior iliac spine to the wing of the iliac bone. The first rod was carried out along the sagittal plane into the anterior iliac spine, the second rod was carried out parallel to the first. The spokes and rods passed through the ilium were fixed in the arc of the Ilizarov apparatus. Dale had three crisscrossing spokes passed through the lower third of the femur, which was fixed in the ring of the Ilizarov apparatus. The ring and the arc of the Ilizarov apparatus were connected to each other by threaded telescopic rods. On the second day after the surgical intervention, the femoral bone was lowered by distraction of 1-2 mm per day. After reaching the permissible level of the location of the femoral heads relative to the acetabulum, the device was removed. Then, hip replacement was performed. The course of the operation was as follows: the position of the patient on the operating table on his side. Anterior-lateral access to the hip joint was performed. The tendons of the large and middle gluteal muscles were resected from the large trochanter. After arthrotomy, the femoral head was resected. In ileocolic dislocations of the femur with a high standing of the femoral head, it was noted that the femoral head was too small and there was an underdevelopment, and after surgical reduction, it was deformed and had a mushroom shape. Ileocolic dislocations of the femur with a high standing of the femoral head, the acetabulum was also underdeveloped, had a triangular shape and the diameter of the cavity itself is much smaller than normal from 3.5 to 5.0 cm, and in depth-from 1.0 to 2.0 cm. With the help of a milling cutter, the acetabular cavity was processed with the subsequent installation of the endoprosthesis cup. With high dislocations and underdevelopment of the acetabulum, the smallest cups of the endoprosthesis were installed - 44, 46, 48-x sizes. With wide dysplastic depressions, cups - 50, 52, 54, 56-were installed, if there was an underdevelopment of the cavity, a roof was created over the head of the femur using an autotransplat taken from the head of the femur, then fixed with two screws.

Driving the femoral component of the endoprosthesis into the bone marrow canal, the hip was reduced by traction along the axis of the limb and rotation, after controlling the volume of movements in the joint, a joint capsule was formed from soft-tissue regenerate, which was formed during the distraction of the femur. Dale, according to the standard scheme, performed

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control hemostasis and suturing of the wound, and for 48-72 hours 1-2 drainage in the wound cavity.

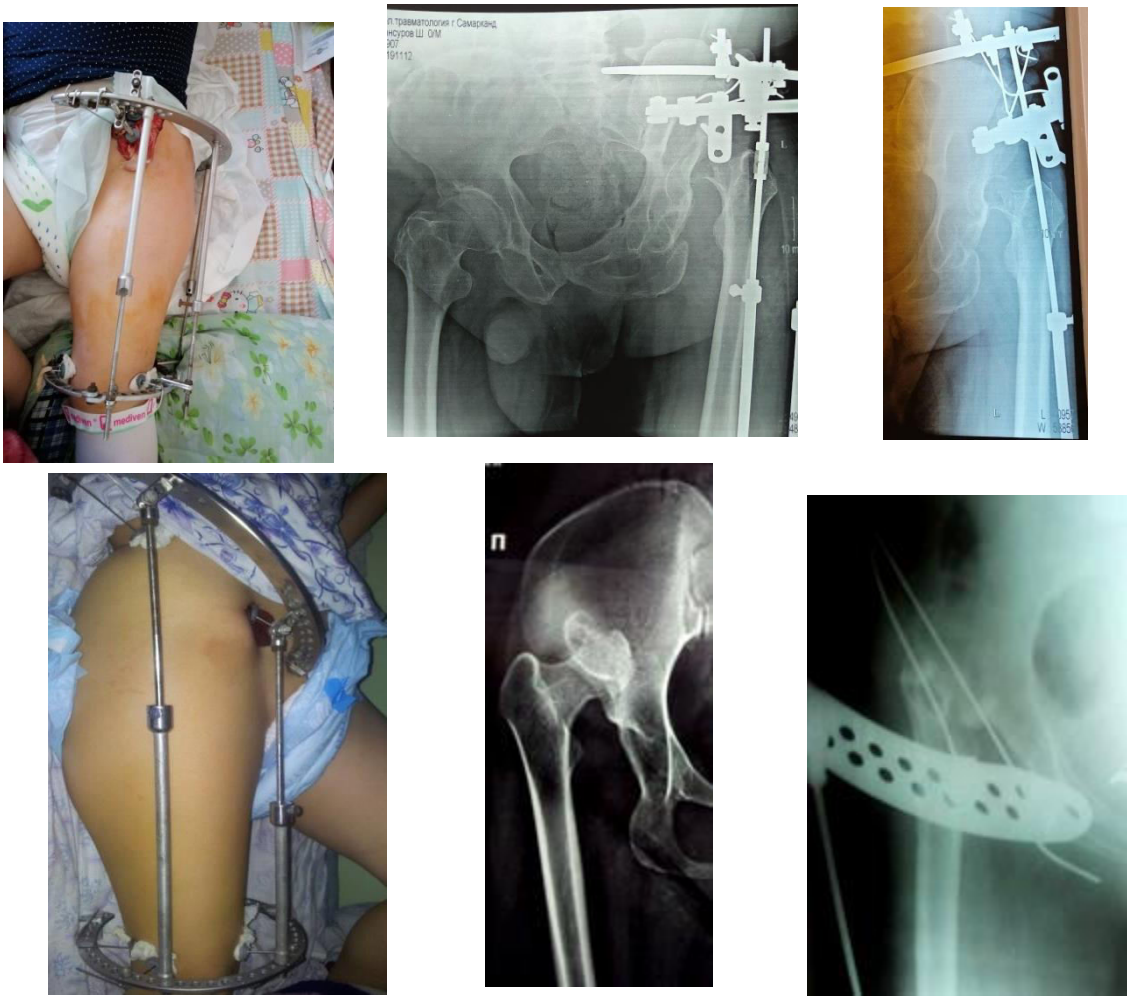

Fig. 1 Patient M. 1975gr. Radiograph before admission and after surgery, the appearance of the method of lowering the femoral head

Antibiotic therapy was mandatory during and after the operation. The day after the operation, they were allowed to sit on the bed and do various exercises to prevent congestive pneumonia. Walking with crutches was allowed on the second or third day, depending on the patient's condition. The gradual load on the operated limb was resolved two weeks after the operation.

The postoperative period includes therapeutic measures aimed at restoring the function of the cardiovascular system, prevention of postoperative complications from the respiratory system, prevention of thromboembolic complications, prevention of wound infection, bedsores, urinary tract infections, antianemic therapy, treatment of exacerbations of somatic diseases and complications.

Clinical, radiographic, physiological, biomechanical, and statistical methods were used to study the long-term results.

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The results of treatment.

The long-term results of total hip replacement in stage 3-4 dysplastic coxarthrosis were studied by us during the follow-up period from 6 months to 9 years. The first control examination was carried out within 1 month from the moment of the operation. In the future, the examination was carried out within 1 month from the date of the operation and in the future it was carried out every 3 months.

Long-term results of treatment were studied for 6 months to 9 years after surgery and studied according to the generally accepted scheme (good, satisfactory, unsatisfactory)using the Harris scale.

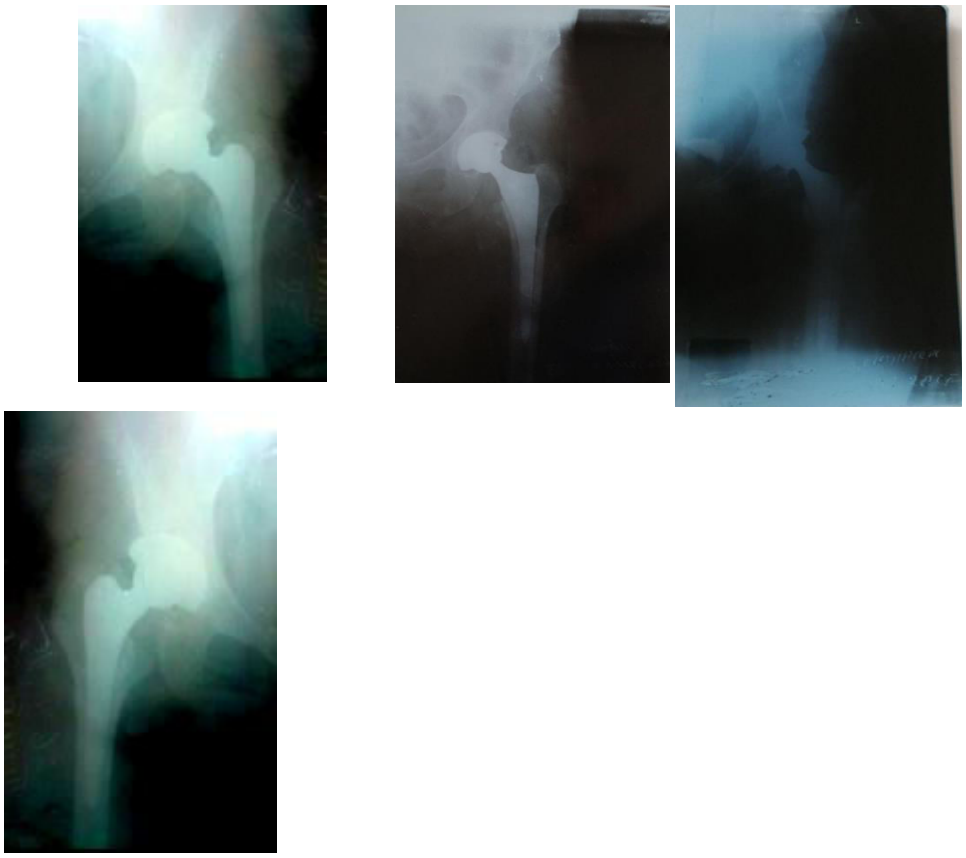

Fig. 2 Radiographs of the same patient after endoprosthetics

A good result in 262 (95.6%) patients was the outcome of the operation, when the patient got rid of pain in the operated joint, the function of the hip joint reached 80-90% of the standard values of the amplitude of movements, the limb became able to support.

A satisfactory result was observed in 9 (3.2%) patients - at the same time, after the treatment, patients complained of moderate pain in the operated joint while walking, the function of the joint was somewhat limited (the amplitude of movements was restored by 50-70 % of the standard values), patients used additional support when walking for three to six months.

An unsatisfactory result of treatment was noted in 3 (1%) patients with a complication in the form of peroneal nerve paresis within a year after conservative treatment, peroneal nerve paresis was eliminated. The second patient was complicated they hiss of the implant, after reevesii and drainage of the wound fixed fistula. In the third patient, the migration of the cup was observed after 3 years. After the revision, the cup was replaced.

The analysis of the results of endoprosthetics according to the main clinical and radiological criteria showed a significant reduction in pain, elimination of a shortened limb, an increase in the volume of movements and an improvement in gait.

Six months after total endoprosthetics, most patients did not notice pain when walking, moving, or it was periodic when moving for long distances, or after prolonged physical exertion.

Conclusions

Our results of hip replacement confirm the correct theoretical validity and high efficiency of surgical treatment of dysplastic coxarthrosis, and positive results of endoprosthetics are observed in 95.6% of cases.

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