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**IMMEDIATE AND DELAYED RESULTS OF SURGICAL TREATMENT FOR
CONGENITAL HYDRONEPHROSIS IN CHILDREN**

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ANNOTATION: In this article, the authors provide an analysis of the results of diagnosis and treatment of congenital hydronephrosis in children of 691 children with congenital hydronephrosis aged 3 to 15 years on the basis of urological departments of three medical institutions in the Fergana Valley: Andijan Regional Children's Multidisciplinary Medical Center (ADMMC), Namanga Regional Children's Multidisciplinary Medical Center center (NODMMC) and Fegran Regional Children's Multidisciplinary Medical Center of Urology in the period from 2013 to 2022.

The authors conclude that the implementation of the developed methods (modified mini-access, drainage method, improved ureteropyelonastomosis) for congenital hydronephrosis, regardless of the degree of complications and the age of the child, made it possible to reduce the period of postoperative rehabilitation, the need for injection of analgesics and reduce the duration of drainage.

Key words: congenital hydronephrosis, pyeloplasty, mini-access, improved ureteropyelonastomosis.

Annotatsiya: Ushbu maqolada mualliflar Farg'ona vodiysidagi uchta tibbiyot muassasasining urologiya bo'limlari negizida 3 yoshdan 15 yoshgacha bo'lgan 691 nafar bolalarda tug'ma gidronefroz tashxisi va davolash natijalari tahlilini taqdim etadi: 2013 yildan 2022 yilgacha bo'lgan davrda Andijon viloyati bolalar Ko'p tarmoqli tibbiyot markazi, Namangan viloyat bolalar ko'p tarmoqli tibbiyot markazi, va Fargona viloyati bolalar ko'p tarmoqli urologiya tibbiyot markazi.

Mualliflarning xulosasiga ko'ra, tug'ma gidronefroz uchun ishlab chiqilgan usullarni (modifikasiyalangan mini-kirish (kesma), drenajlash usuli, takomillashtirilgan ureteropielonastomoz) amalga oshirish, asoratlar darajasi va bolaning yoshidan qat'iy nazar, operatsiyadan keyingi rehabilitasiya davrini qisqartirishga imkon berdi, shu bilan birgalikda og'riqsizlantiruvchi dori-vositalar in'eksiyasi qilish zarurati va drenajlashning davomiyligini qisqartirishga imkon berdi.

Kalit so'zlar: tug'ma gidronefroz, peloplastika, mini-kirish (kesma), takomillashtirilgan ureteropielonastomoz.

Relevance. Currently, against the background of the rapid development and introduction of modern high-tech methods, the problem of congenital hydronephrosis remains relevant and is a relatively common disease of the urinary system [1,2,3,5,6,9]. Laparoscopic pyeloplasty, as an alternative to the classical approach, is becoming more preferred and widely popular in the arsenal of surgical methods for the treatment of hypertension, since they fully meet these

new requirements [8,10,11]. However, the results of surgical treatment of HCV are not completely satisfactory, which is associated with a relatively high incidence of postoperative complications and mortality [4,7,8,12].

The significant proportion and ambiguity of the results of treatment of patients with hydronephrosis requires systematization in tactics and treatment accumulated in recent years. This will make it possible to justify the choice of one or another type of (surgical or conservative) treatment.

The purpose of the study. Analysis of the results of surgical treatment of children with hydronephrosis.

Materials and methods. The work is based on the analysis of the results of treatment of 691 children with congenital hydronephrosis aged 3 to 15 years on the basis of urological departments in three medical institutions of the Ferghana Valley: Andijan Regional Children's Multidisciplinary Medical Center (AODMC), Namanga Regional Children's Multidisciplinary Medical Center (NODMC) and Fegran regional children's Multidisciplinary Medical Center of urology in the period from 2013 to 2022

Accordingly, the patients were divided into two groups for the study: the comparison group - 337 (48.8%) children treated according to accepted standards of management of patients with HYPERTENSION for the period from 2013 to 2017, the main group - 354 (51.2%) children treated for 2018-2022 based on the developed tactical therapeutic and diagnostic algorithm and a modified method of pyeloplasty, designed taking into account the timing of the development of hypertension, the possibilities of minimally invasive surgery (laparoscopy).

Among the children included in the study, boys predominate (72.9%), compared with girls (27.1%).

The majority of children (45.1%) were over the age of 8-15 years (school age) due to the late treatment of patients and their parents, despite the introduction of the mandatory protocol of antenatal and postnatal ultrasound screening of the kidneys and urinary tract, the overwhelming number of children received pronounced clinical symptoms when the kidney reaches enormous size and existing disorders in the urinary system (fig. 1).

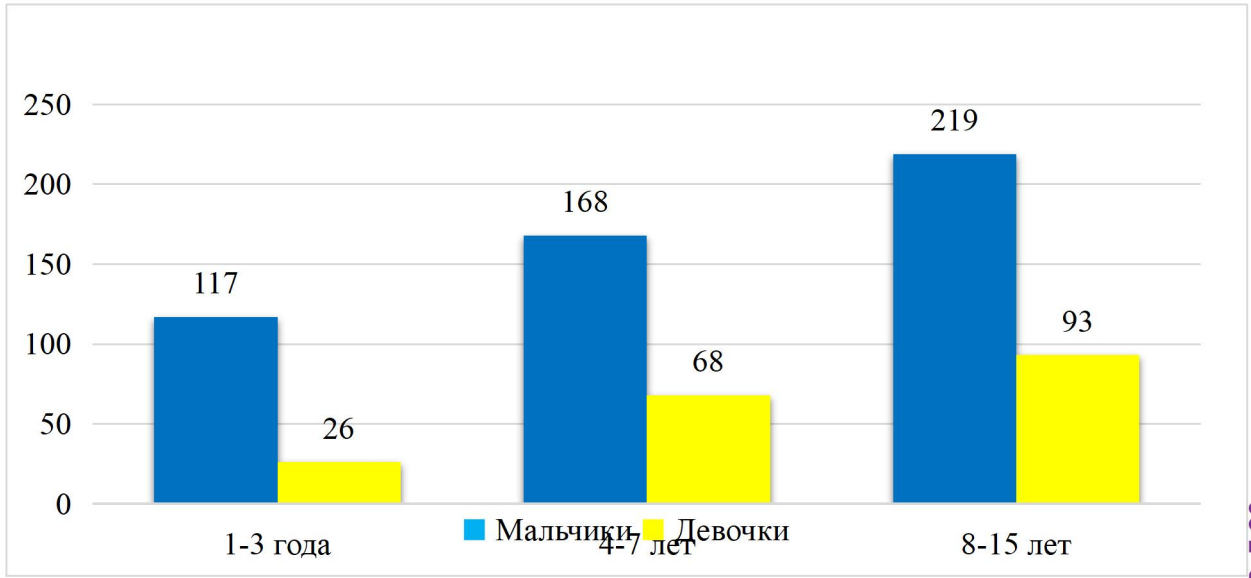
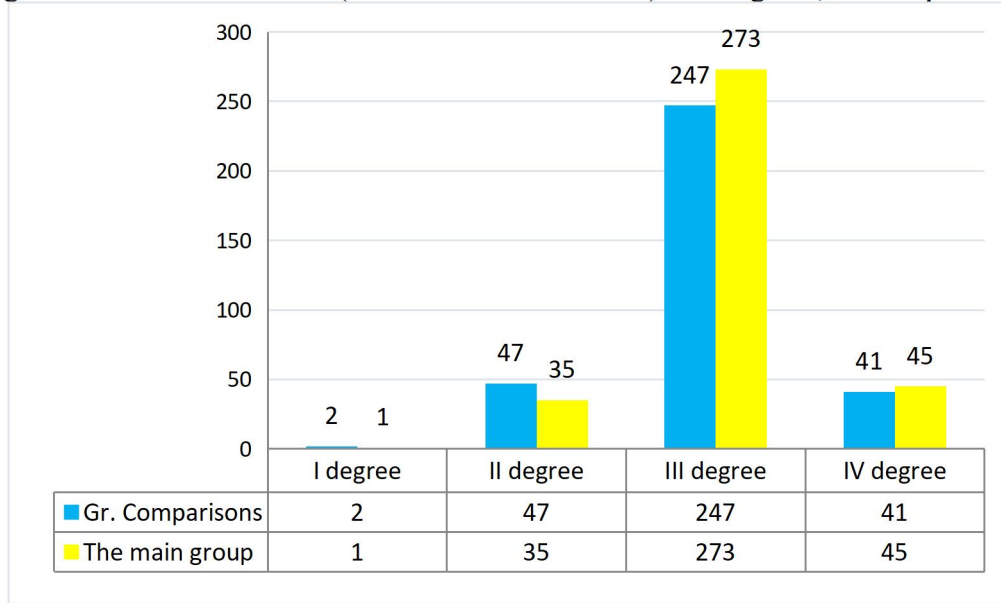


Figure 1. The distribution of patients according to age and gender.

Hydronephrosis of the III degree was most often detected in 247 (73.3%) in the comparison group and 273 (77.2%) children of the main group, much less often - II (13.9% - 9.8%) degrees and IV (12.2% - 12.7%) degrees, respectively (Fig.



2).

Figure 2. Distribution of patients depending on the degree of hydronephrosis.

Of the 337 children in the comparison group, 215 (63.7%) were admitted in satisfactory condition, 105 (31.1%) children were in moderate condition and 17 (5.1%) in serious condition. In the main group, these indicators were 222 (62,7%), 109 (30,8%) and 23 (6.5%), respectively (Fig. 2.6).

Thus, in the vast majority of cases, there were no clinical signs of hypertension, and the diagnosis was established by ultrasound, and most patients noted changes in urine tests.

To predict the possible outcomes of surgery, it is important to analyze the degree of dysplastic changes in renal parenchyma and function, its differentiation and timely diagnosis.

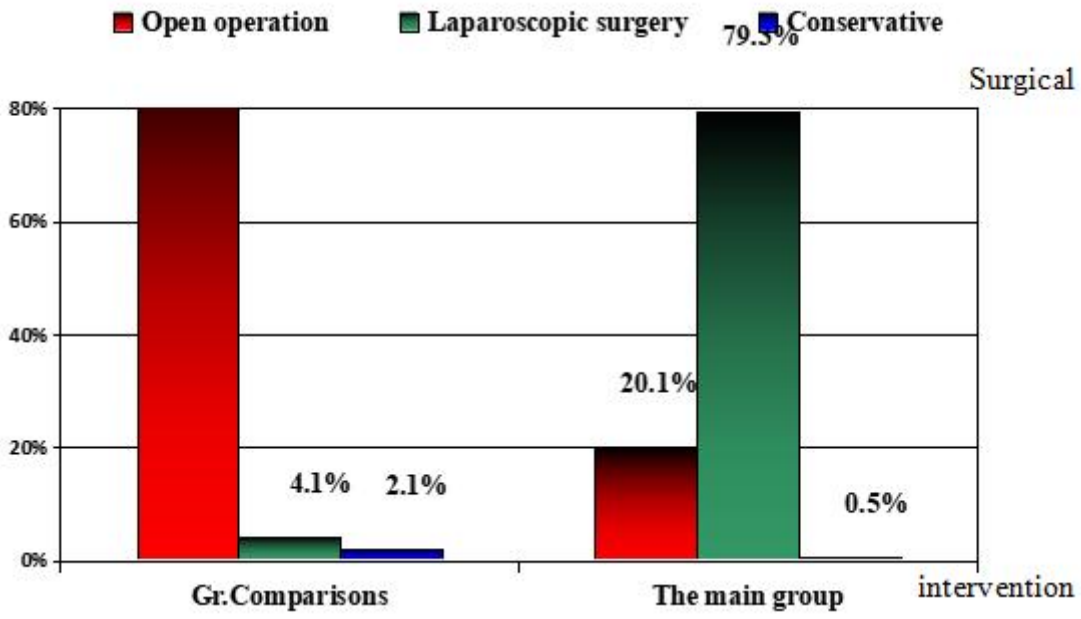


Figure 3. Distribution of children by severity of the condition at the time of admission.

To assess the general somatic status of the patient, the following were performed: a general blood test, assessment of biochemical blood parameters (urea, creatinine, electrolyte levels), the state of the blood coagulation system, determination of blood type and Rh factor, tests for HIV infection, hepatitis and RW, performing a general clinical urine analysis, urine culture for microflora and sensitivity to antibiotics. All patients underwent electrocardiography and chest X-ray.

In the main group of patients, the above-mentioned research methods were used for the differentiated diagnosis of complex cases. Instead of routine numerous instrumental studies, we conducted a combination of ultrasound, extracorporeal urography with MSCT, which allowed us to save time and radiation load on the child.

Surgical intervention was performed in 330 (97.9%) patients of the comparison group and 352 (99.4%) patients from the main group. However, it should be noted that the main surgical aid in patients of the comparison group was open surgery (93.7%), whereas in patients of the main group, the proportion of open intervention was only 20.1% (71 patients), laparoscopic intervention was used in 281 (79.3%) children (Fig. 4).

Figure 4. Analysis of the performed surgical interventions.

In the main group of patients, an increase in the proportion (from 20.1% to 79.3%, P=0.001) of laparoscopic surgery techniques was noted, replacing open surgical interventions with laparoscopic technologies (93.7% and 4.1% in the comparison group).

It should be noted that conservative measures were carried out in 5 (1.5%) children with grade I and II hydronephrosis and in 2 (0.6%) children with grade IV hydronephrosis with concomitant diseases (chronic renal failure). It was decided to conduct dynamic follow-up in these patients.

Results and discussion.

To assess the immediate results of surgical treatment of congenital hydronephrosis, the following clinical parameters were taken into account (Table 1):

1. Duration of the intervention.
2. Duration of anesthesia. •
3. The amount of blood loss.
4. The severity of the pain syndrome in the postoperative period. •
5. Timing of drainage
6. The need for analgesics in days.
7. The duration of the bed days in the postoperative period.
8. The frequency of complications during (intraoperative) and after surgery.
9. Analysis of long-term results

Table 1

Comparison of the clinical effectiveness of surgical treatment in groups

Groups of patients	Comparison group n = 330		Main group n = 352	
	Open traditional.	Laparoscopy	Outdoor with mini access	Laparoscopy
The method of operation				
Indicator				
Duration of the operation	91 ± 12 min	120 ± 11 min	61 ± 7,2 МИН	70 ± 8,1 min
Blood loss	90,1+1,5 ml	70,1+1,5 ml	30,1+1,5 ml	25,1+1,2 ml

The severity of pain syndrome after surgery The timing of drainage The need for analgesics in days Duration of bed days in the postoperative period	3,9±0,6 bed days	2,1±0,3 койко- days	1,3±0,6 bed days	1,0±0,2 bed days
The severity of pain syndrome after surgery The timing of drainage The need for analgesics in days Duration of bed days in the postoperative period	15,2±0,7 days	10,2±0,3 days	2,6±0,1 days	1,1±0,1 days
The severity of pain syndrome after surgery The timing of drainage The need for analgesics in days Duration of bed days in the postoperative period	3,9±0,6 bed days	3,1±0,3 койко- bed days	1,3±0,6 bed days	1,0±0,2 bed days
The severity of pain syndrome after surgery The timing of drainage The need for analgesics in days Duration of bed days in the postoperative period	20,8±3,2 bed days	10,8±2,2 bed days	6,1±0,49 bed days	5,1±0,23 bed days

How apparent, when compared with the immediate U.S., the results of treatment by parameter lengthening operation in the group significantly differed. In the case of repeatability of operations (min) in the case of repeatability of operations (min) in the case of repeatability of operations (min) in the case of repeatability of operations. At the beginning of the development and implementation of laparoscopic intervention of operations with huge laparoscopic reach in the group comparisons B-120 apostille 11 min. In the following case, with the construction of the op Apostille in the main group, the operation was 70. 8.1 min. Dittancy of the drug (min. Apostille) in the open way with change of mini-reach 68.3+1.5, in the huge laparoscopic reach 80 apostille 3.1 min.

One of the most important in the world is the criterion of invasions. In the main group, I was still undergoing surgery with the replacement of mini-lumbotomies and laparoscopic ureteropyeloanastomies with minimal crovopperei. In the case of Apostille in the main groupe method, 30.1+1.5 ml compared with crovotermis in groupe compared with

90.1+1.5 ml. Laparoscopic operations in the main group take check low crovoterai 25.1+1.2 ML, anti crovoterai in the group comparisons 70.1+1.5 ml.

Assessment of pain in the postoperative period, conduction of part and parts of anesthetics, initiation of patient activations.

After operation nervy bolevoiy syndrome rated according to you (visual-analogue shkala Bolly (RAC. prep. №2425) - Visual Analogue Scale Pain Intensity Assessment (VAS)).

In the main group, 2 hours are spent after the operational intervention of uveni afteroperative pain on your variroval from 1 to 5 Bal'l and Bal'l in the mean equal to 2.6 Bal'l 1.8 and 2.2 Bal'l 1.4 Bal'l. In group comparisons, the level of postoperative pain in your bull ranged from 1 to 6 points of flattening an hour after surgery, which on average corresponded to 4.61 ± 2.16 points. In groupe compared pain syndrome cherez 1 hour in average pain in 1.3 times, Cem in main groupe.

Lost 24 hours of uroven hurts in main groupe B. urgl from 0 to 3 ballov and sastavil 1.32 apostille 1.01 and 0.81 apostille 1.01 Bhalla in srednem. In a groupe comparisons. that the indicator by actual sutok variroval from 1 to 5 ballov, in the mean B. 85 Bal, 1.56 Bal, which is more, com in the main groupe, in 2 Raza. In the assessment of data, the indicator dropped 5 sutoc after operations, in the main groupe on differed from 0 to 2 ball, in the average ball equal 0.92 apostille 0.56 and 0.82 apostille 0.46 Ballam. In the groupe comparisons uroven hurts bumble from 0 to 4 Bumble and in the mean - 1.73 Bumble 1.82 Bumble.

Takim image, cherez 3 Suto intensity of bolev penghushteniy in groupe compare bolshe in 1.8 times, Cem in main. It is possible to conclude that uveni hurts in the early postoperative period in patients, operated on with developed empiric methods, and usovervention of the reliable operation, Cem in patient group, who has changed the classic traditional empiric method.

In the groupe comparison, 12.4% of cases of single-dose ketonal injection, 31.8% of two-dose injections, 56.3% of patients with triple-dose analgesics. In the main group, there was a low incidence of analgesic use-84.3% of cases of single-dose ketonal intake, 12.8% of patients of two injections, and 10 (2.8%) of analgesic intake. 5).

Drawing 5. Multiplicity of analgesic in groupah

Compared (2.4% of total patient numbers), receiving non-narcotic analgesic drug in peri Penate after operations, using extended therapies in patients with food-saving in the field of surgical intervention. The Apostille detectives characterized their own pain, how strong, how operationally injured, irradiated in plecho, in the belt, in the non-climactic cases, even in the pahovu region and moshonku, with the burning of heat and "Pokal Apostille". It hurts like a character can be appreciated as a neuralgia of the intervertebral nerve or the ulnar section. The main cause may be a quilting of the nerve in the joint of the tkanei and the M. P. P. in a wide incision. All these patients were discharged to receive an injectable non-narcotic pain medication three times a day for 3-4 days after surgery, with further transfer to oral nonsteroidal anti-inflammatory drugs.

repeatable repeatable repeatable repeatable repeatable repeatable repeatable repeatable repeatable repeatable repeatables in 9 (2.7%), with conversion to traditional repeatable repeater in 6 (1.8%) - (42.8% out of 14). NIH damage stenki chisechnica U 1 (0.3%), salnica U 1 (0.3%), lesion in prachn Urga sosudov U 2 (0.6%), cropping in zabryushin Urga checked u 1 (0.3%) in pop Urga retroperitoneal laparoscopies.

In the base group, iatrogenic injuries were observed in only 2 (0.5%) patients with mini-access surgery in the form of bleeding from wounds and retroperitoneum, in 1 (0.28%) cases from wounds, while the incision length did not exceed 6 cm. In laparoscopic ureteropyeloanastomosis, the ossification observed so much in the video treatment from the early extravasation trocar 3 (0.8), with conversion to "mini-dosup" in 1 (0.2%).

In the main groupe with respect to K groupe, the iatrogenism unit was compared with the damaged smart by 11% (by 12.4 to 1.4%), with smart conversion numbers by 1.6% (by 1.8 to 0.2%).

In a groupe comparison of post-operationalimplementation, per-operationalimplementation with operationalimplementation was recorded in 31 (9.4%) detei, with total relaparotomium in 3 (0.9%), relaparoscopy in 2 (0.6%) detei.

In NIH, the mochevoy was observed in 5 (1.5%), anastomosis in 4 (1.2%), gematuria in 3 (0.9%), drainage function impairment in 5 (1.5%), learner and painful mochevoy discharge in 7 (2.1%).

In the main groupe postoperative evaluative, in the case of the complexities, in the case of the operant evaluative, the intervention was marked at 3 (0,8%) and in the case of the non-perform repeparoscopies and relumbotomies.

In the groupe comparison purulent-septic complex diagnostics urgent U 9 (2.7%) diseased urgent. From NIH infilltrat ran VanCamp U 6 (1.8%) and suppuration ran VanCamp U 3 (0.9%).

In the main groupe purulent-septic complex diagnostics, 1 (0.28%) of the disease was diagnosed, which was due to the condition of the pus-septic infiltratoma afteroperative injury.

In the post-operational period, the first paragliding urge and cosmetic urgefekt the post-operationalandrateexplanationalandratexplanationalandratexplanationalandratexplanationalalandratexplanationalandratexplanet. The average size of the incision is then fromfranced20.4 CM (2.6 cm), the minimum size of the incision is 80 mm, the maximum is 100 mm. In the base group, the average wound size after open operations with a mini-achievement was 40.2 mm (± 2.8), the minimum incision size was 40 mm, the maximum was 50 mm.

Thus, the performance of an improved ureteropyeloanastomosis from a mini-access and laparoscopic method indicates that both methods were performed with almost the same frequency of low intra- 1.4% (decrease by 11%) and postoperative complications of 0.8% (decrease by 9.4%) associated with the operation. However, they should still be performed with strict consideration of the indications and contraindications, as well as the advantages

and disadvantages of each method (see chapter 4). It is important to note that these methods are not competing, but are complementary to each other, that is, each of them still has its own role and place in the surgery of congenital hydronephrosis.

Our patients had postoperative complications of a general nature and mortality associated with it. Thus, after surgery in the comparison group, acute hepatic-renal insufficiency was diagnosed in 2 (0.6%) patients with mortality in 2 (0.6%) cases, in 2 (0.3%) patients of the comparison group, mortality occurred after relaparotomy, which was accompanied by bleeding, in 1 (0.3%) due to damage to the renal vessels. During laparoscopy, the cause was considered to be errors in the selection of a non-vascular zone during the extraction and mobilization of renal vessels. In the main group, mortality occurred in 1 (0.28%) patient who had severe concomitant diseases, despite the preoperative correction of diseases, due to the IV degree of hydronephrosis, this complication occurred in this child.

Exacerbation of pyelonephritis was observed in 7 (2.1%) of the comparison group and was not observed in the main group. In the main group, the absence of this complication is associated with adequate preoperative preparation, reliability of hemostasis of the edges of the dissected pelvis and washing of the cup-pelvic system with decasan solution after the formation of the first half of the anastomosis.

The overall mortality rate was 0.28% (1 out of 354) and 1.48% (5 out of 337).

Thus, general complications in the comparison group as a whole were diagnosed in 20 (5.9%) patients with a fatal outcome in 5 (1.5%) cases, whereas in the main group - in 2 (0.5%) patients with a fatal outcome in 1 (0.2%) case (reduction of general complications by 5.1% and mortality by 1.3%).

Recovery, according to the results of a urological examination performed after 6 to 8 months (restoration of urodynamics of the upper urinary tract, improvement of kidney function) was noted in 97.6% (675 children).

Long-term results were observed in 325 out of 350 children (Fig. 6).

During hospitalization, a complex of clinical and instrumental research methods was used. Additional studies and consultations of specialists in connection with concomitant diseases were conducted for individual patients.

All patients were interviewed using a special questionnaire. Patients who did not complain were examined on an outpatient basis, and those with complaints were examined inpatient. The data obtained were compared with a questionnaire and the long-term results of surgical treatment were evaluated.

Excellent results were obtained in 213 (60.2%) patients of the main group and in 10 (2.9%) of the comparison group, characterized by a complete absence of symptoms of the disease after surgery; the patient is practically healthy, complete absence of pain, does not follow a diet, complete recovery of LMS is noted in urine tests and excretory urography. The patient was practically healthy, did not follow a diet and did his previous

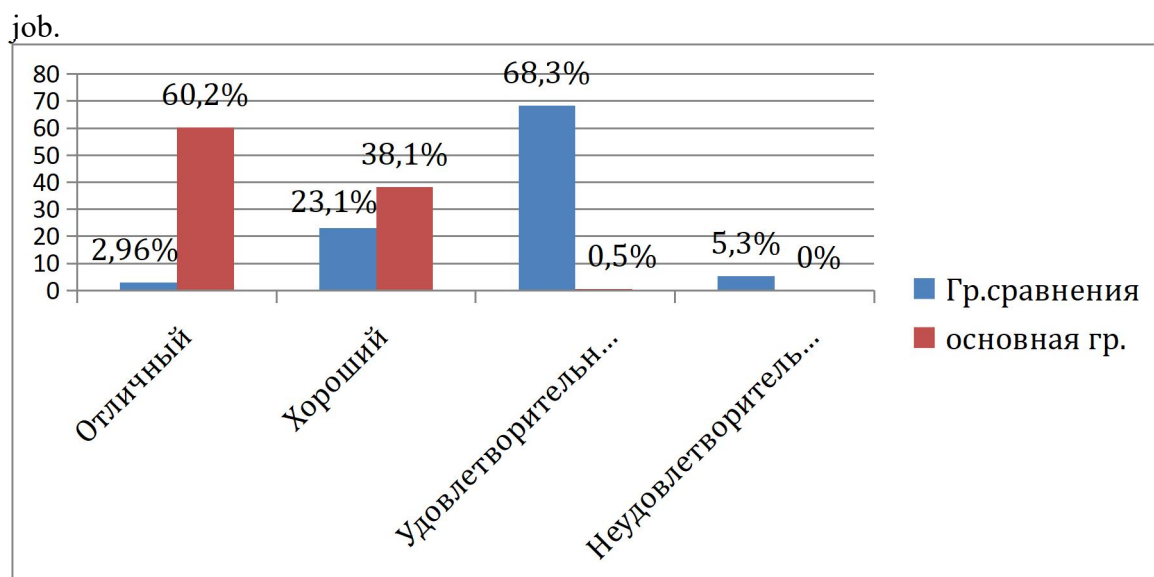


Figure 6. Long-term results

Good results were observed in 135 (38.1%) patients of the main group and in 78 (23.1%) of the comparison group. The children noted a short-term feeling of heaviness in the lumbar region. Ultrasound, excretory urography and absence analyses showed no signs of changes in urine tests and clinical manifestations in the form of pain syndrome, reduction of the collector system of the operated kidney according to ultrasound data, restoration of urine passage through the newly created pyeloureteral anastomosis and improvement of differential renal function.

Satisfactory results were obtained in 2 (0.5%) of the main and 230 (68.3%) patients of the comparison group, respectively: soreness around the postoperative scar, minor renal dysfunction, exacerbation of chronic pyelonephritis with the appearance of periodic lower back pain, transient changes in urine tests (minor leukocyturia and proteinuria), periodic clinical signs of the disease, delayed emptying of the calyx-pelvic system (I degree of hydronephrosis (pyeloectasia). At the same time, all manifestations of the disease were corrected by conservative treatment.

A group of patients with unsatisfactory long-term results deserves special attention. When an unsatisfactory result was noted during the examination, the presence of lower back pain, episodes of exacerbation of pyelonephritis were noted, hypoplasia with wrinkling of the operated kidney was determined by ultrasound examination, or there were signs of hydronephrosis of II-III degree, there were no functions of the operated kidney on excretory urography, and the differential function of the kidney worsened according to diuretic renography.

An unsatisfactory result was noted in 18 (5.3%) of the comparison group, in the main group in none of the cases.

Conclusions. The introduction of the developed methods (modified mini-access, drainage method, improved ureteropyelonastomosis) in congenital hydronephrosis, regardless of the

degree of complications and the age of the child, made it possible to reduce the period of postoperative rehabilitation from 20.8 ± 3.2 to 6 ± 0.42 days.

The optimized management tactics of patients with congenital hydronephrosis, depending on the nature of the lesion, allowed to increase the proportion of patients with no complications in the postoperative periods by 25.6%, reduce the mortality rate from 1.5% to 0.2%, and the developed improved ureteropyeloanastomosis creates optimal conditions for the healing of the newly created anastomosis and increases the proportion of excellent results by 57.2% (from 2.96% up to 60.2%), good results by 15.0% (from 23.1% to 38.1%, a decrease in satisfactory results by 67.6%.

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