



LONG-TERM RESULTS OF TREATMENT OF PYELONEPHRITIS IN PREGNANT WOMEN

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ANNOTATION

The results of treatment with acute pyelonephritis of pregnant women in 67 patients were studied. The data obtained revealed high efficiency in providing highly skilled care to patients with acute pyelonephritis of pregnant women. This led to a significant reduction in the duration of treatment of patients, normal delivery and a significant improvement in the quality of life of patients.

KEY WORDS: *acute pyelonephritis of pregnant women, stenting of ureter, percutaneous nephrostomy, delivery, quality of life of patients.*

INTRODUCTION

The frequency of pyelonephritis is very high. According to A.Ya. Pytel and S.D. Goligorsky (1977), pyelonephritis is one of the most common human diseases, which takes second place after catarrh of the upper respiratory tract and is at the same time the most common form of kidney disease. According to O.L. Tiktinsky (1984), among urological patients with various diseases, secondary or concomitant pyelonephritis is determined in 89.3% of cases.

Due to the anatomical and physiological characteristics of the body, women suffer from pyelonephritis 5-6 times more often than men. According to N.A. Lopatkin and A.L. Shabad for 15 years of observation, the proportion of women among patients with pyelonephritis increased from 69 to 83%. The penetration of infection into the kidney mainly occurs ascending from the urethra and lower urinary tract. The short urethra in women and the proximity to the anus allow periurethral pathogenic bacteria to easily penetrate the lower urinary tract during sexual intercourse or urethral manipulations. In girls and women with a violation of local protection in the presence of infection on the eve of the vagina and vagina, periurethral colonization by

pathogenic flora and infection from the urethra often occur.

Men are less susceptible to ascending infection, since the secretion of the prostate gland contains zinc, which has a bactericidal effect.

In recent years, there have been reports on the phenomenon of bacterial adhesion to urothelial cells. Escherichia coli and Proteus have fimbriae, with the help of which they are fixed to urothelium and then move up the urinary tract. As A.V. Lyulko noted, the adhesive properties of bacteria are a prerequisite for the fixation, colonization and production of endotoxins, that is, for the induction of the inflammatory process in the kidneys and urinary tract. According to R. Maskell, the highest adhesion was observed in acute pyelonephritis, lower in acute cystitis and insignificant in asymptomatic bacteriuria, i.e. bacterial adhesion to a certain extent characterizes their virulence.

Clinical symptoms of acute pyelonephritis include: sudden onset of tremendous chills, high fever, constant pain in the lumbar region on one or both sides, dysuric effects, frequent urination, nocturia and pain during urination are sometimes observed. Of the common symptoms, malaise,



weakness, nausea, vomiting, headache, and others can be observed.

Modern technology has made it possible to abandon the traumatic methods of catheterization or stenting of the ureters in favor of alternative methods. It is advisable for the patient to perform percutaneous nephrostomy both for the purpose of derivation of urine and as the first stage of a subsequent endourological intervention through the formed fistulous course.

Inadequate drainage of the urinary tract or irrational antibiotic therapy can be a prerequisite for the development of purulent complications of pyelonephritis, fraught with possible urosepsis or bacterial shock. In these cases, patients are shown open surgery. As a rule, organ-preserving operations are performed.

Acute pyelonephritis of pregnant women is more common in later pregnancy, usually in the last trimester, but can occur in the first and second trimester. The development of acute pyelonephritis in pregnant women in the first and second trimester is usually associated with hormonal changes in the female body after pregnancy, and in the third trimester it is usually associated with mechanical compression of the ureter.

One in ten pregnant women has a urinary tract infection (UTI). Acute pyelonephritis develops in 20–40% of pregnant women with a urinary tract infection, and relapses of acute pyelonephritis in 10–30% of pregnant women. A study by Kass and his co-authors showed that 20–40% of women with asymptomatic bacteriuria develop pyelonephritis during pregnancy. Treating bacteriuria reduces the risk of developing pyelonephritis. In acute pyelonephritis of pregnant women, there are always violations of urodynamics and the possibility of toxic effects of drugs on the fetus.

Treatment of pregnant pyelonephritis: second and third generation cephalosporins, aminopenicillin with β lactamase inhibitors or aminoglycosides.

Fluoroquinolones, tetracyclines and TMP (trimethoprim) in the first trimester and sulfonamides in the last trimester are contraindicated.

A slow decrease in temperature and an expansion of the upper urinary tract may be an indication for stenting the ureter, and antibiotic prophylaxis should be considered before delivery and in the postpartum period.

MATERIALS AND METHODS

From 2011 to 2016, 67 pregnant women with gestational pyelonephritis from the age of 19 to 34 were under our supervision in the Khorezm branch of the RSSC (Republican Specialized Center of Urology). Their gestational age was from 12 to 35

weeks. They complained of pain in the lumbar region, an increase in body temperature from 38 to 39–40 ° C with chills, nausea, lack of appetite, and general weakness. The duration of these symptoms varied from 3 to 5 days. All pregnant women underwent a comprehensive laboratory and instrumental examination aimed at elucidating the functional state of the upper urinary tract and the activity of the inflammatory process in the kidneys, with the collection of urine from the middle portion for bacteriological culture. When examined by a gynecologist, none of the patients showed a threat of miscarriage. Statistical processing of the data obtained by the method of student and Fisher.

RESULTS AND ITS DISCUSSION

All pregnant women were divided into 2 groups. The 1st group included 41 patients whose ultrasound (ultrasound) of the kidney revealed a pelvic expansion of 2.5 to 3.5 cm, calyx expansion of 0.5 to 1.5 cm. In these pregnant women, urodynamic disturbances of urine outflow from upper urinary tract, which required the restoration of impaired passage of urine by performing internal drainage of the stent and the simultaneous use of etiotropic therapy to eliminate the progression of pyelonephritis. Two pregnant women received percutaneous nephrostomy in the upper third due to knee-shaped deviation of the ureter. Combination therapy was prescribed to patients of this group: antibiotic (ceftazidime) 1.0 x 3 times a day, intramuscularly and canefron 1 tab x 3 times a day, as well as infusion and detoxification therapy.

The 2nd group consisted of 26 patients in whom an ultrasound of the kidney revealed a slight expansion of the pyelocaliceal system and showed no signs of obstruction of the upper urinary tract. One patient in this group showed an increase in intoxication, a deterioration in general condition during pregnancy progression without the threat of miscarriage. She did not show a deterioration in the concentration ability of the kidneys and an increase in the level of creatinine and urea in the blood, but in the general analysis of blood there was a high leukocytosis with a shift to the left. This patient was diagnosed with acute apostematic pyelonephritis and had surgery with revision and decapsulation of the kidney and drainage of the kidney. In the postoperative period, she was also prescribed ceftazidime 1.0 x 3 times a day, intramuscularly and canefron 1 tab x 3 times a day, as well as infusion and detoxification therapy.

In 80 patients of both groups, in bacteriological cultures of urine, *E. coli* 10x4-10x5 CFU / ml sensitive to ceftazidime, cefotaxime, and cefoperazone was isolated in 80.6% of cases. *Proteus* was found in 5% of cases, and *Klebsiella* in 5%,

Staphylococcus in 5.4%, and microflora was not found in the remaining 4%. In the 1st patient with a gestational age of 30 weeks (2nd group), chlamydia trachomatis was found.

In group 1, 39 patients under intravenous anesthesia performed stenting of the upper urinary tract, and nephrostomy in 2 patients. They were

prescribed antibiotics based on sensitivity. In group 2, 26 patients were also prescribed etiotropic therapy according to the antibiotic profile, and one of them was supplemented with vilprofen (daily dose of 1000 mg) taking into account the detected chlamydia trachomatis.

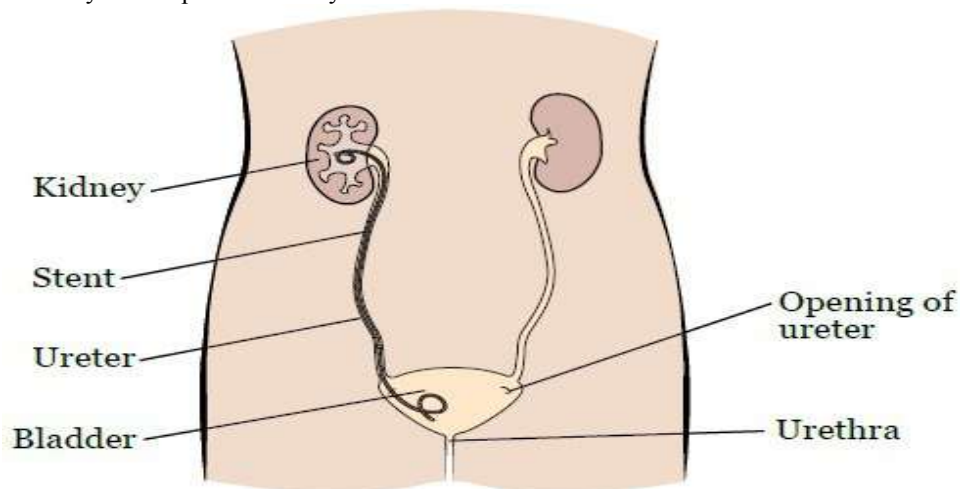


Fig. 1. Uterine stenting.

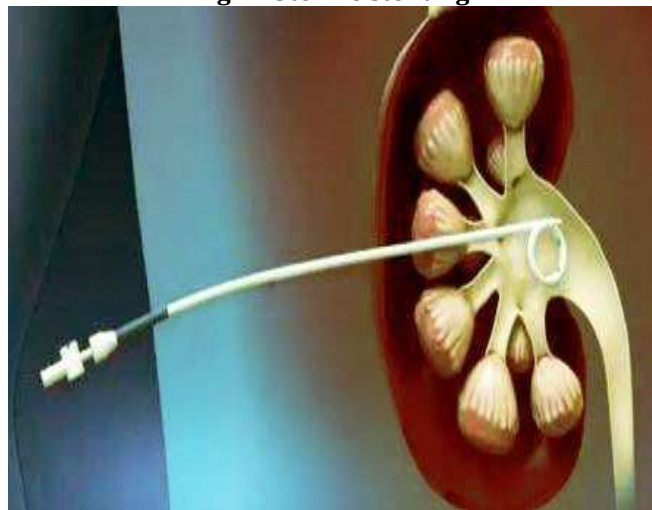


Fig 2. Percutaneous nephrostomy.

We used intensive antibacterial, infusion, detoxification therapy for patients of both groups, as well as knee-elbow therapy.

Evaluation of the effectiveness of treatment was carried out in dynamics by changing ultrasound, reducing clinical symptoms, restoring the passage of urine, urinalysis and the observation of a gynecologist. Adverse events and drug tolerance were evaluated by laboratory and subjective data.

After treatment, a positive clinical effect was noted in patients of both groups, but especially in group 1, who underwent stenting of the ureter and PC nephrostomy (2 patients) to eliminate impaired passage of urine from the upper urinary tract. Their

clinical symptoms of the disease 2 times reliably faster disappeared, their bed was reduced, their general condition improved compared with patients of group 2, where these indicators disappeared somewhat more slowly. In 3 patients of the 1st group, a stent was removed before childbirth; the rest had stent removal and nephrostoma 3-4 weeks after the birth.

In 37 women in labor (90%) of the 1st group, there were deliveries on time, without complications, and in the 2nd group, half of the patients had premature births with a low fetal weight.

Thus, in the treatment of acute pyelonephritis of pregnant women, it is necessary to



carefully collect anamnesis from patients, timely hospitalize them for an adequate diagnosis and highly qualified adequate treatment, and, if the condition worsens, signs of urinary tract obstruction, perform stenting and / or PC nephrostomy before delivery with ultrasound monitoring of the kidneys, pelvic organs, a joint examination of a urologist and gynecologist. This will improve delivery results in patients with acute pyelonephritis in pregnant women.

Patients were followed up for 3 years. Every 6 months, an ultrasound scan of the kidneys was performed, urine analysis according to Nechiporenko. Only 3 patients (from the 1st group who removed the stent before delivery) and 5 patients (who removed the nephrostomy before delivery) in the postpartum period (from 3 to 6 months) were re-infected. These patients were treated in-patiently until recovery.

CONCLUSION

In pregnant women, stent and / or nephrostomy should be removed after delivery. This approach will improve the quality of life of patients and prevent reinfection.

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