Diagnosis and treatment of emphysematous pyelonephritis in diabetic patients.

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ABSTRACT

One of the most severe diseases of the genitourinary system is emphysematous pyelonephritis, which is rarely observed but carries serious consequences. This article discusses cases of emphysematous pyelonephritis in combination with diabetes mellitus.

Keywords: Pyelonephritis, diabetes mellitus, emphysematous pyelonephritis, comprehensive examination.

Introduction. Emphysematous pyelonephritis is a severe life-threatening disease characterized by the presence of renal parenchymal and perirenal infection caused by gas-forming microorganisms (such as the intestinal shelf). Mostly emphysematous pyelonephritis occurs in adult patients with diabetes mellitus. To date, about 80 cases of this disease have been described in the literature. The authors, who pay special attention to this pathology, point to its severity and note that life-threatening complications often occur with EP. All cases of EP were noted in adult patients. The process is usually one-sided. There is no single point of view on the treatment of emphysematous pyelonephritis [1,6]. Most authors believe that conservative therapy for this disease should be short-term, and if it is ineffective, nephrectomy should be resorted to . Kidney drainage is recommended only in severely debilitated patients with significant operational risk. It should be noted that some conditions, such as diabetes mellitus, urinary tract obstruction and immunodeficiency, predispose to the development of this disease. [1,4,7,8,].

E. coli, Pseudomonas and Proteus can lead to the development of emphysematous inflammation in the kidneys. Bacteria enter the kidney tissue when the urinary tract is blocked by a stone, an abscess kidneys or hematogenous way against the background of diabetes mellitus. Localization distinguish unilateral and bilateral emphysematous pyelonephritis.

Women get sick more often than men. The lethality of this pathology is 60-80%. [2,3,5,6,].

Materials and methods of research : In 2018, two patients with this pathology were observed in the Department of Emergency Urology of the FFRRCEMMP. Kasimov Asror, born in 1975 , was admitted to the Department of Emergency Urology on 02/03/2018 at 10:00 am with complaints of fever, chills, weakness, malaise, dry mouth, nausea, vomiting, pain in the left side of the abdomen. Examination: Complete blood count: HB-109.0 g/ l ,

erythrocytes 3.4x10 ^{12} /l, c.p-0.9, platelets 240.0x10 ^{12} /l, leu-10.3x10 ^{9} /l, ESR-38mm /h General urinalysis: protein-0.120 g/l, epithelium 2-3 in p/z, leukocytes all over, erythrocytes unchanged 14-15, bacteria ++++, mucus Biochemical blood test: total protein-61.8 g/l, ALT 15.6 U / L , AST 14.6 U / L , Total bilirubin 14 mmol / l, bound bilirubin 2 mmol / l, free bilirubin 12 mmol / l, urea-5.8 mmol / l , glucose 4.4 mmol / l 52.0 g/l.

Instrumental studies: Ultrasound of the kidneys: Left kidney 130 x 60mm, CCI is not determined. Right kidney 155x60mm, CCI-20mm.

MSCT conclusion : left-sided emphysematous pyelonephritis, paranephritis on the left, pyonephrosis on the left, lymphadenopathy retroperitoneal space on the left.

As a result of a thorough examination, the diagnosis was made **:** Complicated form of urinary tract infection. Acute pyelonephritis on the left, complicated by emphysematous pyelonephritis, acute paranephritis on the left, pyonephrosis on the left. Urosepsis . hyperthermic syndrome. Concomitant **: Type** II diabetes mellitus, severe course.

In the preoperative period, in order to prepare the patient for surgery, antibiotic therapy was prescribed (IV generation cephalosporins, fluoroquinolones III generation), infusion therapy was carried out to improve blood rheology (rheosorbilact , Ringer's solution , sodium chloride solution 0.9%, sodium bicarbonate solution 4%); symptomatic therapy with analgesic and hypothermic purposes of NSAIDs (diclofenac solution), antispasmodics (no-shpa 2.0, platifillin 0.2% -1.0). In order to regulate the protein balance, solutions of amino acids (Infezol , Selemin) were used, in the preoperative period , one-group fresh frozen plasma was transfused in the amount of 480 ml.

On March 5, 2018, the patient underwent an operation: Lumbotomy according to Fedorov on the left. Nephrectomy on the left, sanitation and drainage of the retroperitoneal space on the left.

In the postoperative period, the patient continued adequate antibiotic and infusion therapy, transfused a single-group erythrocyte . mass 0 (I) RH + in the amount of 1 liter 926 ml and fresh frozen plasma in the amount of 4 liters 402 ml.

Dressings were made daily with debridement after the surgical wound with the Dekasan growth solution .

In the postoperative period, there was a decrease in total protein to 52.0 g/L. Blood tests were repeated in dynamics: HB-107.0 g/l, erythrocytes 3.4x10 ^{12} /l, cp 0.9 , leukocytes - 10.0x10 ^{9} /l, ESR 8 mm/hour. Urinalysis: protein-0.055 g/l , single epithelium, 3-4 leukocytes in p / c, unchanged erythrocytes 6-8. Biochemical blood test: total protein 62.0g/l, ALT 10.0 U / L , AST-14.0 U / L , Total bilirubin 12 mmol/l, bound bilirubin 2 mmol/l, free bilirubin 10 mmol/l, urea-18.4 mmol /l, glucose 10.8 mmol /l

During 32 days of hospitalization , the general condition of the patient improved, the insurance drains were removed and he was discharged in a satisfactory condition for further observation by a urologist at the place of residence.

A similar case of the patient Gofurov Urmonjon born in 1959 was transferred from the resuscitation department of Furkat sub-branch of the emergency center to the intensive care unit of the FFRRCEMMP in a serious condition with complaints of fever up to 39 ^{0} ^{C} , dry mouth, nausea, weakness, malaise, arching pains in the left side of the abdomen and lumbar region on the left. From the anamnesis, an increase in body temperature to 39 ^{0} - 40 ^{0} C is observed during the month.

On examination, the patient is sharply emaciated, the general condition is severe, the skin is pale in color. In the left half of the lumbar region, locally the skin is sharply tense . Laboratory studies:

General blood test HB 91.0 g / l, erythrocytes 3.1 x10 ^{12} / l, c.p -0.9 , leukocytes 15.5 x10 ^{9} / l, ESR - 8 mm / hour.

General urinalysis : b -tree-0.100 g/l, epithelium 1-2, leukocytes completely, erythrocytes unchanged 5-6, bacteria ++,

Biochemical blood test: total protein 52.8g/l, ALT-36.0 U / L , AST-AST-18.0 U / L , urea-19.8 mmol/l , g lucose 13.8 mmol/l.

Instrumental studies :

Ultrasound **:** in the perirenal space on the left a large amount of purulent contents with the presence of gas. The left kidney is 100x45mm, CCI 13-14mm, the kidney is displaced upward towards the diaphragm. In the left pleural sinus, the presence of fluid is 1.2 liters.

Diagnosis: Complicated form of urinary tract infection. Acute emphysematous pyelonephritis on the left. Total purulent paranephritis on the left. Urosepsis . hyperthermia syndrome.

Concomitant **:** Transient renal failure. uremic encephalopathy. Anemia of moderate severity. Cachexia.

In the preoperative period, the patient was transfused with one-group O (I) RH + fresh frozen plasma in the amount of 480 ml, adequate intensive antibiotic therapy was started.

On February 8, 2018, the patient underwent surgery : Lumbotomy according to Fedorov on the left, about 2.5 liters of pus was evacuated . Left nephrectomy . During the operation, the patient was transfused with a single-group erythrocyte mass in the amount of 1 liter. After the operation, the patient was transferred to the intensive care unit, where he received appropriate intensive care for 4 days. Subsequently, antibiotic therapy (ceftriaxone , cefaperazone-sulbactam , levofloxacin 500 mg-100.0) was continued in the emergency urology department. Continued infusion therapy (rheosorbilact , 0.9% sodium chloride solution, 4% sodium bicarbonate solution, Ringer's solution), antifungal drugs (fluconazole-100.0), NSAIDs (diclofenac solution). Infusion therapy continued to normalize blood rheology, a single-group transfusion was transfused. erythrocyte mass in the amount of 1 liter 940 ml, freshly frozen plasma in the amount of 7 liter 073 ml. The postoperative wound was sanitized daily with Dekasan solution . The patient was treated in the department for 32 days and was discharged in a satisfactory condition for further observation by a urologist at the place of residence.

Conclusion:

1. Timely diagnosis and surgical tactics, adequate treatment and postoperative care led to saving lives and improving the condition of patients.
2. In order to prevent complications in patients with diabetes mellitus, dispensary observation with monitoring of glucose levels, urine and blood tests is necessary.

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