

APPRECIATION OF THE EFFICIENCY OF THE MAGNETIC INFRA-RED LASER THERAPY IN THE COMPLEX TREATMENT OF THE ACUTE PYELONEPHRITIS IN THE SECOND HALF OF THE PREGNANCY WITH THE HELP OF ELIP-TEST

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Acute pyelonephritis is one of the most frequent extragenital diseases at pregnant women. As a rule, it occurs in the second half of the pregnancy in 2,5-5% cases, when the pressure in the pelvis two times increases. Factors, that predispose to the onset of the acute pyelonephritis in pregnancy, are next: the dilatation of the urinary tract because of compression of the ureters by the gravid uterus and dilated ovarian veins, as well as by hormonal mechanisms, availability of the asymptomatic bacteriuria. One of the most important problem in urology is an adequate therapy of the acute pyelonephritis in pregnancy and the appreciation of the efficiency of this therapy, because the acute pyelonephritis can be complicated by the pre-term delivery. We use the common laboratory and instrumental methods of the examination of patients' state, as well as the special ELIP-Test (ELISA-detected Probability of Pathology in Pregnancy, i.e. the immune-fermentable test, that reveals the risk of pathology development in pregnancy). It was worked out for the appreciation of the risk of the embryonal disorders development and found on the detection of natural antibodies to the row of specific albumins, that take part in the process of the differentiation and morphogenesis. The increase (hyperreactivity) or the decrease (hyporeactivity) of maintenance of regulator autoantibodies heightens risk of unfavourable outcome of pregnancy. According to ELIP-Test index all women can be divided to 6 groups (K1, K2 . . . K6). When the number of the group is higher, than more marked differences will be present in the system of detected autoantibodies.

We carry out the research, in what we included patients with acute pyelonephritis in second half of the pregnancy. All women had no chronic diseases of the urinary tract and onset of acute pyelonephritis in anamnesis. We divided our patients to 2 groups. The main group was formed by 21 women, who were treated with the complex treatment with the usage of the magnetic infra-red laser therapy (MIL-therapy). In the control group we included 19 patients, who were treated without usage of MIL-therapy. In both groups standard laboratory and instrumental methods of monitoring of patient state were performed. Also we used the method of ELIP-Test in the beginning, the middle and in the end of the treatment.

During the treatment we used second- or third-generation cephalosporins, aminopenicillin plus β -lactamase inhibitor, also we used hydration and symptomatic therapy.

40 patients with acute pyelonephritis with the term of the pregnancy from 20 to 36 week and in the age of from 16 to 40 years were included in our research. 33 (82,5%) had first pregnancy, 6 (15%) – the second one, 1 (2,5%) – the third. Because of the obstruction the ordinary ureteric catheter was performed at 20 (50%) patients. 21 women were included in the main group (complex treatment with MIL-therapy), and 19 – in the control group (treatment without MIL-therapy). More frequently we observed the right-side acute pyelonephritis – 28 (70%) patients, more rarely both-side acute pyelonephritis – 10 (25%) and only 2 (5%) women had the left-side pyelonephritis. 26 (65%) patients had the dilatation of collecting system on the side of the defeat, 10 (25%) – had both-side dilatation, a 4 (10%) – had no dilatation.

All patients, when they were administered to hospital, had the degree of ELIP-Test, that was out of physiological borders. 37 (92,5%) patients were taken to the hyporeactive group, 3 (7,5%) patients – to the hyperreactive group. The last were members of the main

group. In it 17 (81%) patients had one-side inflammatory process and 4 (19%) – two-side one. After the complex treatment with the usage of MIL-therapy we noticed, that 3 (14%) patients moved from hyporeactive to normal-reactive group, 15 (72%) patients remained in the hyporeactive group and 12 (80%) from them moved up to more favourable group (from K4 to K3, from K3 to K2) and at 3 (20%) patients the degree of autoantibodies did not change. 3 (14%) patients remained in the hyperreactive group. 1 (33,3%) patient from them moved to more favourable group (from K3 to K2), at 1 (33,3%) patient the degree of embryonal autoantibodies did not change, 1 (33,3%) patient moved to more unfavourable group (from K3 to K4), that probably depended on the presence of chronic adnexitis. In the control group 13 (68,5%) patients had one-side and 6 (31,5%) – both-side pyelonephritis. After administered treatment without MIL-therapy 14 (74%) patients remained in the hyporeactive group, at 2 (14%) patients indexes of ELIP-Test did not change, 12 (86%) degree of autoantibodies decreased, 10 (83%) of them move down to one more unfavourable group (from K2 to K3 or from K3 to K4), but 2 (17%) women moved down through 2 groups (from K2 to K4, from K3 to K5). 5 (26%) patients move from hyporeactive to hyperreactive group. That probably was united to the usage of an antibiotics.

Before delivery 3 (7,5%) patients from all observed patients had recurrent acute pyelonephritis. All of them were from control group (treatment without laser therapy).

In the main group the delivery was in the term at all 21 patients. The average mark of new-born children was 8-9 regarding to APGAR scale. The main indexes of physical development were within the standard limits. Only one woman from this group, who remained in hyperreactive group with movement to more unfavourable group according indexes of ELIP-Test, had a child with understated indexes of the physical development at the birth.

In control group 1 (5%) patient had a premature birth at 34 week. After the treatment of acute pyelonephritis this patient remained in the hyporeactive group, she moved down through two groups according ELIP-Test data, she had the recurrent onset of the acute pyelonephritis during the pregnancy, that resulted in the threat of the pregnancy interruption, after that obstetricians decided to provoke the premature birth by the stimulation. Any obvious inborn pathology or anomaly of development were not noticed in this group within 6 months. The average of the mark according to APGAR scale, was seven.

Our data show, that usage of the MIL-therapy in the complex treatment of the acute pyelonephritis in the second half of the pregnancy is more effective than the treatment by traditional therapy. Also MIL-therapy render the immune-stimulating act on the organism. Also we notice, that the patients, whom we used the MIL-therapy in the complex treatment, did not develop the recurrent acute pyelonephritis, at the same time in the control group 3 (16%) patients had the recurrent onset of the acute pyelonephritis. Valuing physical indexes of child development at the birth, we can notice, that children, whose mother were treated with the usage of MIL-therapy, had better indexes comparing to the children, whose mothers did not receive MIL-therapy. So, with the help of ELIP-Test we show, that the usage of MIL-therapy in the complex treatment of the acute pyelonephritis in the second half of the pregnancy is very effective in the treatment of this disease, decrease the probability of the recurrent onsets of the acute pyelonephritis during this pregnancy and give better prognosis about the physical condition of new-born.

ESTIMATION OF THE EFFECTIVENESS OF QUANTUM THERAPY IN A COMPLEX TREATMENT OF ACUTE PYELONEPHRITIS

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Acute pyelonephritis remains one of the most frequently encountered pathologies among the urinary tract diseases.

Over the last several years an increasing number of cases is observed in all age groups despite the innovations in antibiotic therapy.

This situation make up urologists of the world to seek up for a new methods which could improve the situation such as introduction of the technical advances in laser medicine into clinical practice.

Acute pyelonephritis is an acute infectious process, which damages renal parenchyma and pelvic system. The infection penetrates by two ways. The ascending way is prevalent when colonization of lower urinary tract by enterobacteriaceae is usually proceeding the attack.

The second way of infectious penetration is through the blood flow, occurring not so often. In this case an extrarenal infectious locus is found.

Such factors as obstruction, neurogenic bladder, diabetes, inborn anomalies, pregnancy and catheters are substantively increasing the risk of this pathology.

Acute pyelonephritis usually starts with sickness, fever and pain in lumbar area. Sometimes gastrointestinal symptoms such as nausea and vomiting are not rare. Disuria is a sign of lower urinary tract contamination and is registered in a half of all cases.

Pain in costovertebral area is found out during the physical examination. Leucocyteuria, haematuria and bacteriuria are observed in urine analysis.

Creatinine rate may increase as a sign of temporary damage of renal function and dehydration.

Bacteriological urine analysis is diagnostic and permits to prescribe a coordinative antibiotic therapy. Ultrasonography shows that renal parenchyma is enlarged and hypoechogenic.

The investigation was aimed to estimate the effectiveness of a traditional and complex quantum therapy of acute pyelonephritis. The study was performed in series of 81 patient (75 female and 6 male), the average age was 35,5 years old. The patients were separated into two groups. In the first group (40 patients , 36 female and 4 male) a combined quantum therapy consisting of antibiotic and quantum therapy by RIKTA quantum installation was applied.

In the second group (41 patients, 39 female and 2 male) of patients a routine antibiotic treatment was used.

Quantum irradiation was performed on each day over the kidney area, during 10 minutes, beginning from the first day of the patients admission into the hospital, for 7 days.

The estimation of the effectiveness was based on clinical and laboratory analysis, including physical examination dynamics, temperature curve, blood and urine analysis and ultrasonography.

While estimating the results it was noticed that in the first group the fever disappeared on the second day of treatment, which was at 2 days earlier as compared to a control group (on the fourth day), the normalization of temperature was registered on the third and fifth day in both groups coordinatively, pain in costovertebral area disappeared on the fourth and sixth day, pain on palpation –on the fifth and seventh day of treatment.

The analysis of the laboratory results showed that number of leucocytes of blood normalized on the second day, while on the third day- in the second group. The same dynamics was in lymphocyte and neutrophyll rate.

A significant diminishing of leucocyteuria was marked on the first day and completely disappeared by the sixth day in the patients of the first group. In the second group the normalization of leucocyteuria was registered by the ninth day of treatment.

The level of creatinine diminished in 27(68%) patients and 22(55%) patients in the first and in the second group accordingly.

Bacteriologic analysis of the urine showed the complete stopping of bacterial growth in all patients by the second day in the main group and by the forth day – in the second.

Ultrasound examination demonstrated the normalization of renal parenchyma parameters on the third day in the first group and on the fifth day –in the control.

Therefore the results of the investigation, based on clinical and laboratory analysis showed the efficiency of quantum therapy used in complex treatment of acute pyelonephritis.

This method permits to achieve earlier stopping of inflammatory process and improve the results of treatment of this pathology.