PERCUTANEOUS TREATMENT OF CORALLOID NEPHROLITHIASIS.

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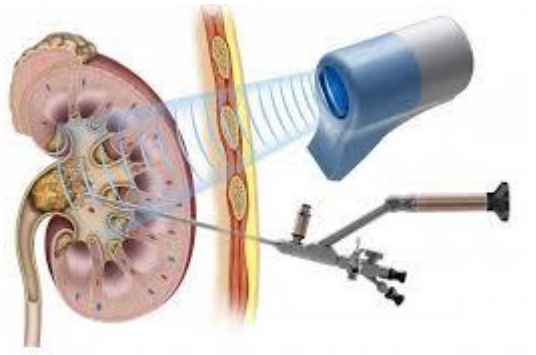
Introduction. Urolithiasis (ICD) is a metabolic disease characterized by the formation of concretions in the kidneys and urinary tract, caused by various endogenous and (or) exogenous factors, often has a hereditary character, is prone to relapses and persistent severe course.

Coralloid nephrolithiasis is a nosological unit when a stone occupies almost the entire cavity system of the kidney and in advanced cases is its impression. It should be noted that coralloid nephrolithiasis by according to various sources, it reaches 4-12% . Disappointing statistics regarding the risk of relapse: within a year, the probability of recurrence of coral stone reaches 10%, and within 5 years - 50% in the absence of adequate treatment. Treatment of this disease requires extensive knowledge of modern methods of its diagnosis, rational treatment of urolithiasis and modern principles of stone removal.



Surgical tactics for coralloid kidney stones (CS) still remains controversial. Currently, there are still supporters of open nephrolithotomy, laparoscopic surgery is being introduced anatrophic nephrolithotomy in CS. However, despite the high risk of infectious and hemorrhagic complications in this pathology, percutaneous nephrolithotripsy (PNL) is the main method of surgical treatment of patients with CS.

The purpose of this work was to evaluate the effectiveness of PNL in coral nephrolithiasis.

Materials and methods. From 1999 to 2023, percutaneous nephrouterolithotripsy was performed in 1358 patients in our clinic. Coral-like stones were found in 371 (27.3%) of them. According to the classification of the Research Institute of Urology, K1 was detected in 228 (61.4%), K2 —in 74 (20.0%), K3 — in 45 (12.1%) and K4 —in 24 (6.5%) patients. Primary stones occurred in 296 (79.8%) cases, recurrent — in 75 (20.2%). Unilateral CS was diagnosed in 345 (93.0%) patients, bilateral — in 26 (7.0%). According to the degree of renal dysfunction, the majority of patients (71.7%) had a secretion deficiency from 25 to 50%, the rest (28.3%) — from 50 to 70%. The diagnosis

of CC was based on the patient's complaints, anamnesis and objective status data, and the results of special research methods. In addition to ultrasound and radioisotope studies of the kidneys, excretory urography, spiral computed tomography with 3D image reconstruction was performed in patients with CC. The above methods made it possible to determine the size and density of the stone, its stereometric location, changes in the morphofunctional state of the kidneys and upper urinary tract, angioarchitectonics of the kidney. In addition to standard laboratory research methods, a Howard stress test was performed at the preoperative stage and the level of parathyroid hormone was determined.

The operation was performed in the X-ray room using Karl Storz endourological equipment under ultrasound and X-ray control. With coral-like stones K1 and K2, one access was created into the renal cavity system. Of the 302 patients, puncture was performed through the lower cup in 91.4% of cases, and in the rest — through the middle (8.6%). In patients with K3 and K4 for maximum stone removal two accesses were used, and 10 patients required the creation of three accesses. In one session, they tried to remove most of the stone, and then performed remote lithotripsy for residual stones. Only in 8 cases, PNL was performed in two stages. After the operation, drainage of the renal cavity system was performed for 4-7 days. Before and after surgery 6-12 months after it, the patients underwent laboratory tests and dynamic scintigraphy.

Results. Exacerbation of chronic pyelonephritis was observed in 46 (12.4%) patients. Bleeding occurred in 25 (6.7%): in 21 cases it was stopped conservatively, and 4 patients underwent superselective embolization of the damaged artery. In one case, the operation was complicated by damage to the pleural cavity and swelling of the washing fluid. Along with drainage of the kidney, the patient underwent puncture and drainage of the pleural cavity. There were no cases of injury to the colon and other parenchymal organs.

Percutaneous nephrolitholapaxy as monotherapy was effective in 265 (87.7%) out of 302 patients with K1 and K2. By K3 and K4 were completely removed in only 40 (58.0%) of 69 cases. Residual stones occurred in 66 (17.8%) of 371 operated patients. At the same time, the 10 of them were localized in secondary cups with a narrow neck, so DLT was not performed. According to dynamic scintigraphy, normalization of urodynamics of the upper urinary tract and improvement of kidney function were noted in all patients.

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