

154. CHEMICAL COMPOSITION OF THE RENAL CALCULI

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Introduction. Nephrolithiasis is a multifactorial pathology that ranks first among the urinary tract pathologies. The increased incidence of the urolithiasis is determined by multiple factors such as lifestyle, diet, migration of population from cooler rural areas to warmer urban areas. The method of surgical treatment of urolithiasis, previously applied, can also influence the risk of this disease, moreover the patients with reserved fragments of calculi in the kidneys have a higher risk of recurrence. Although the incidence of the pathology is very high, some patients can produce only a single stone in their lifetime. It's an important thing to know the regional peculiarities of the chemical composition of kidney stones to select the correct therapeutic strategy. The impact of the disease can be reduced by administering prophylactic treatment to patients with recurrent urolithiasis. Meanwhile in Republic of Moldova, there is no information about the peculiarities of the chemical composition of urinary calculi.

Aim of the study. The research of the chemical composition of calculi at the patients with recurrent urolithiasis in the Republic of Moldova.

Materials and methods. In this prevalence descriptive study 180 kidney calculi were analyzed by using the chemical modified method according to Hodgkinson and infrared Spectroscopy with Fourier transformant.

Results. Phosphate stones (calculi) have been identified in 37(20.55%) cases (calcium phosphate - 17(9.44%), struvites - 18(10%), brushitis - 2(1.11%) cases). Calcium oxalate calculi were found in 68(37.78%) cases; (whewellites - 44(24.44%); weddelites - 24(13.33%) were determined, being followed in frequency of uric acid - 48(26.67%). In 27(15%) cases calculi of mixed composition (whewellites+apatite carbonate - 8(4.44%), whitlockites+protein - 8(4.44%), whitlockites+weddelites - 4(2.22%) whewellites+uric acid - 7(3.9%) patients) were detected. Other calculi types were rarely found (2,8%).

Conclusions. Kidney calculi of calcium oxalate, uric acid and calcium oxalate and uric acid mixed calculi are the most frequently found in Moldova. The relative high incidence of infected calculi (30.8%) justifies the necessity of appropriate antibacterial therapy in the pre- and postoperative period. Correction of the lifestyle and the instruction of the patients using this information can substantially improve the results of the measures for primary prophylaxis and prevent the recurrence of urolithiasis. The obtained information about chemical composition of kidney stones, with the identification of specific risk factors for Moldova would be helpful for the healthcare professionals to plan preventive measures for reduce the high incidence of this disease.

Key words: chemical composition, recurrent urolithiasis, infrared Spectroscopy

155. CONTEMPORARY DIAGNOSTIC METHODS OF NEPHROLITHIASIS

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Introduction. Nephrolithiasis is ranked third in the urological diseases, since 2005 it has occupied the first place. A wide range of diagnostic methods available for renal lithiasis