

QUESTIONED SURVEY OF THE TREATMENT OF PATIENTS WITH URATE LITHIASIS

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✓ *Resume*

Using a questionnaire survey of 145 patients with uratelithiasis who underwent examination and treatment in the urology department of the AGMI clinic in the period from 2017 to 2020, it was found that the most effective litholytic therapy for stones consisting of anhydrous uric acid and uric acid dihydrate up to 1.5 cm - 90.5% and 87.5%, respectively. With stones consisting of ammonium urate, the dissolution efficiency was 20.0%.

Key words: urolithiasis, urateurolithiasis, ureterolithotripsy, litholytic therapy, stone density.

РЕЗУЛЬТАТЫ АНКЕТИРОВАНИЯ БОЛЬНЫХ С МОЧЕКАМЕННОЙ БОЛЕЗНИ

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✓ *Резюме*

При анкетном опросе 145 больных урателитиазом, прошедших обследование и лечение в урологическом отделении клиники МИГА в период с 2017 по 2020 годы, установлено, что наиболее эффективна литолитическая терапия камней, состоящая из безводной мочевой кислоты и дигидрата мочевой кислоты. до 1,5 см - 90,5% и 87,5% соответственно. Для камней, состоящих из урата аммония, эффективность растворения составила 20,0%.

Ключевые слова: мочекаменная болезнь, уратуролитиаз, уретеролитотрипсия, литолитическая терапия, плотность камней.

BUYRAK TOSH KASLLIGI DAVOSIDAN KEYINGI SO'ROVNOMA NATIJALARI

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2017 yildan 2020 yilgacha bo'lgan davrda AGMI klinikasining urologiya bo'limida tekshiruv va muolajadan o'tgan uratelitiyozli 145 bemorni so'rovnomasidan foydalanib, suvsiz siydik kislotasi va siydik kislotasi dihidratidan iborat toshlar uchun eng samarali litolitik terapiya aniqlandi. 1,5 sm gacha - mos ravishda 90,5% va 87,5%. Ammoniy uratdan iborat toshlar bilan eritish samaradorligi 20,0% ni tashkil etdi.

Kalit so'zlar: urolitiyoz, urateurolitiyaz, ureterolitotrips, litolitik terapiya, tosh zichligi.

Relevance

In the structure of urolithiasis, an increase in the incidence rate of urate urolithiasis has been noted in recent years. If in the 50s of the 20th century it ranged from 5 to 10%, now the number of patients with urate urolithiasis is up to 20% of the total number of patients with urolithiasis [1, 2, 3, 4, 6]. The increase in the incidence of urate urolithiasis is explained by the increased

influence of a number of unfavorable external environmental and mental factors on the human body: physical inactivity leading to impaired phosphorus-calcium metabolism, increased consumption of protein products and alcohol, the use of certain drugs [2, 5, 6, 7]. Selection method for treating a multifactorial and determined by the number of stones, the

localization of stones, their size and shape, the terms disease, presence const utstvuyusch urinary tract infections, functional sposobnos tew kidneys, presence of concomitant their diseases, general condition of the patient, the anatomy of the upper urinary tract and other features of the [1, 8, 9, 10, 11, 12]. Modern medicine has a whole arsenal of conservative, operative and combined methods of treatment of urate urolithiasis [2, 3, 4, 7, 14, 16].

Objective of the study: a questionnaire survey of the treatment of patients with urate lithiasis.

Material and methods

The material of the study was retrospective and prospective clinical and laboratory-instrumental data on 145 patients with urate lithiasis who were examined and treated in the urology department of the ASMI clinic in the period from 2017 to 2020 years.

Of the 145 patients, 87 (60.0%) were men and 58 (40.0%) were women. The age of patients ranged from 17 to 79 years, in the most mature and socially active age (from 21 to 60 years) there were a significant number of patients - 100 (68.9%), and 86 (59.3%) patients were older 50 years old.

To monitor the effectiveness of litholytic therapy in urate nephrolithiasis, ultrasound was used, which was performed in all 92 (100.0%) patients. Even in 15 (16.3%) patients was performed with spiral computed tomography definition m density urate stones of units Hounsfieldu, which allows to determine not only urate nature of the stone, but also to assume

a more particular its composition. Examination of patients with uratelithiasis, in order to determine the optimal method of treatment, began with the examination of the patient and clarification of anamnestic data. As part of this work, patients with urateurolithiasis filled out a questionnaire, in which, along with general data (age, weight and height, hereditary history, observation and treatment by a urologist at the place of residence, the presence of harmful production and occupational hazards, the onset and duration of uratelithiasis, primary or recurrent nature of the disease, stone passage in history, the presence of previous surgeries on the kidneys and the urinary tract by about uric acid stones, the incidence of inflammation in the kidney, the presence and severity of concomitant diseases), their adherence to a particular diet has been studied in detail and the nature of the diet. This questionnaire was filled out by 145 (100.0%) patients and significantly facilitated the assessment of the effectiveness of the litholytic therapy carried out or previously carried out in combination with the prescribed diet. When analyzing anamnestic data, 35 (24.1%) patients noted the presence of one or another form of urolithiasis in the immediate family (parents, brothers and sisters). 101 (69.6%) patients had a recurrent nature of the disease, which occurred in the period from 6 months to 10 years or more, while 51 (50.5%) patients had a recurrence of uratelithiasis during the first 5 years, in 27 (26.7%) patients within 6-10 years, and in 23 (22.8%) patients a relapse occurred after 10 years. When studying the duration of the disease with urateurolithiasis, the following data were obtained (Table 1).

Table 1.

Distribution of patients by disease durationuratelithiasis

Duration of the disease, In years	Number of patients	
	Absolute	%
Up to 1 year	32	22,1
From 1 to 3 years	37	25,5
From 4 to 6 years	31	21,4
From 7 to 10 years	21	14,5
From 10 and more	24	16,5
Total	145	100

Result and discussion

To monitor the effectiveness of litholytic therapy in urate nephrolithiasis, ultrasound was used, which was performed in all 92 (100.0%) patients. Even in 15 (16.3%) patients was performed with spiral computed tomography definition m density urate stones of units Hounsfieldu, which allows to determine not only urate nature of the stone, but also to assume a more particular its composition.

The results of the study showed that most often stones were localized in the calyces of the lower segment - in 49 (33.8%) patients, then in the pelvis - in 43 (29.6%) patients, in the calyces of the middle segment - in 31 (21.4%) patients. %) of patients, in the cups of the upper segment - in 19 (13.1%) patients. Ureteral stones were most often localized in the upper third - in 29 (20.0%)

patients, then in the lower third - in 19 (13.1%) patients, and in the middle third of the ureter - in 12 (8.3%) patients.

Table 2.

Distribution of patients with urate lithiasis by localization of stones

Localization of stones	Number of patients	
	absolute	%
Pelvis	12	8.3
Cup (combination of cup groups)	48	33.1
Pelvis + uppersegmentcalyces	1	0.7
Pelvis + cups of medial segments	3	2.1
Pelvis + cups of the lower segment	10	6.9
Pelvis + combination of cup groups	11	7.6
Upper third of the ureter	13	8.9
Middle third of the ureter	5	3.4
Lower third of the ureter	10	6.9
Combination of kidney and ureteral stones	32	22.1
Total	145	100

All patients were divided into 2 main groups: the first group included 85 (58.6%) patients with stones localized within the renal pyelocalicealsystem, the second group consisted of 60 (41.4%) patients with ureteral stones, as well as a combination of localization of stones in the lumen of the ureter and in the kidney. Of 60 patients in the group with ureteral stones, 35 (58.3%) underwent contact ureterolithotripsy and 25 (41.7%) remote ureterolithotripsy.

It should be noted that 5 (3.4%) patients arrived at the clinic with initially only the kidney - 3 (60.0%) patients removing the contralateral kidney was performed in connection with acute obstructive pyelonephritis, due occluding stone, y 1 (20.0%) of the patient - for terminal

hydronephrosis, and in 1 (20.0%) patient - due to rupture of the kidney. Among patients with urateurolithiasis, 31 (21.3%) had abnormalities in the development of the kidneys and upper urinary tract (kidney cyst, double kidney, horseshoe kidney and others), information about these anomalies is presented in Table 3. As can be seen from Table 3, renal cysts predominated among the kidney anomalies, the double kidney accounted for 19.5%, the rest of the kidney anomalies accounted for 16%. 74 (46.8%) patients had previously undergone various methods of surgical interventions - data on them are given in Table 3. Table 4 shows that 78 patients in the anamnesis denied the presence of various methods of surgical interventions.

Table 3

Anomalies of kidney development in patients with urateurolithiasis

The character of anomaly	Number of patients	
	absolute	%
Horseshoe kidney	2	6,4
Double kidney	6	19,5
Lumbar dystopy	1	3,2
Nephroptosis	2	6,4
Kidney cyst	20	64,4
Total	31	100

Of 60 patients in the group with ureteral stones, 35 (58.3%) underwent contact ureterolithotripsy and 25 (41.7%) remote ureterolithotripsy.

It should be added that this group did not include patients who underwent conservative therapy and who had stones independently. Of the 85 patients in the first group, 20 (23.5%) underwent extracorporeal lithotripsy as monotherapy, and another 65 (76.5%) patients received litholytic therapy. Remote lithotripsy in

the form of monotherapy was performed due to snowfall or the inability of patients to conduct complex litholytic therapy in full. The group of patients receiving litholytic therapy additionally included 27 patients with a combination of ureteral and renal stones - they underwent surgery for ureteral stones followed by dissolving therapy for kidney stones. Of the 92 patients treated litholytic therapy, 20 (21.7%) was subsequently performed remote lithotripsy, 4 (4.3%) patients underwent Perk secret nephrolithotripsy, 6 (6.5%) patients

pyelolithotomy. Total 145 patients fulfilled 4 percutaneous nephrolithotripsy 6 pyelolithotomy, 41 contactureterolithotripsy, Session 92 remote lithotripsy.

Of the 145 patients, 78 (53.8%) were admitted to the clinic on an emergency basis and, due to complications of urate lithiasis (renal colic, pyelonephritis attack), received emergency care, up to drainage of the kidney and various methods of surgical interventions. The remaining 67 (46.2%) patients were admitted as planned in the primary order, as well as after inadequate or ineffective litholytic therapy, while stones were detected in them at the prehospital stage during examination. It should also be noted that out of 67 patients, 8 (11.9%) had previously been admitted to other medical institutions on an emergency basis, and after stopping renal colic they were transferred to the category of planned patients and sent to our clinic to determine the treatment tactics.

It was found that in 8 patients the chemical composition of the stone was represented by anhydrous uric acid and uric acid dihydrate, the density of stones in them was 338 ± 4.5 HU. In 4 patients, the chemical composition of stones was represented by ammonium urate, the density of stones was 364 ± 5.6 HU.

A month after complex litholytic therapy, complete dissolution of kidney stones was achieved in 56 (60.8%) patients. In another 6 (6.5%) patients, partial dissolution of stones was achieved, in connection with which they continued litholytic therapy for another month, after which they also achieved complete dissolution of stones. Thus, stone dissolution was achieved in 62 (67.4%) patients.

The distribution of patients by efficiency litholytic therapy depending on the size of the stones and drenirova Nia kidney shown in the table.

Table 4.

The effectiveness of litholytic therapy in patients depending on from the method of kidney drainage

Stonesize	Number of patients with undrained kidney	Number of patients with kidney drained catheter - stent	Number of patients with drained nephrostomy kidney
upto 1.5 cm	21 (65.6%)	13 (81.2%)	2 (28.6%)
morethan 1.5 cm	15 (65.2%)	11 (78.6%)	-

As can be seen from the table, the most effective litholytic therapy turned out to be the most effective for kidney stones both up to and more than 1.5 cm - in the group of patients with an undrained kidney, it was 62.5% and 65.2%, respectively, in the group of patients with a drained internal catheter. Kidney stent - 81.2% and 85.7%, respectively.

It should be noted that out of 92 patients who received litholytic therapy with citrate mixtures, 8 patients had side effects in the form of gastrointestinal disorders (flatulence, diarrhea, heartburn), these phenomena were arrested conservatively.

It should also be noted that 30 patients who received litholytic therapy suffered from gout. When taking citrate mixtures, no patient experienced an exacerbation of gout. The undoubted advantages of litholytic therapy include the possibility of carrying it out by the patients themselves, here also lies its main disadvantage - the necessary constant monitoring of the acidity of urine. Only the correct intake of drugs containing citrate mixtures, as well as adherence to a diet aimed at limiting the intake of purines into the body, can dissolve urate kidney stones,

and achieve optimal acidity of urine. Compliance with dietary recommendations by patients, dynamic monitoring of the indicators of purine metabolism and ultrasound monitoring as a simple and non-invasive method of research allows in most cases to prevent recurrence of urate nephrolithiasis.

Conclusion

1. A systematic study of urine acidity in patients with urolithiasis and especially urate lithiasis should become mandatory during litholytic therapy and metaphylaxis. The effectiveness of litholytic therapy of urate lithiasis can only be achieved by developing an individual dosage of citrate mixtures under constant control of urine acidity.

2. The size and chemical structure of urate stones affects the effectiveness of litholytic therapy. The most efficient litholytic therapy was at rocks, consisting of an anhydrous uric acid dihydrate uric acid up to 1.5 cm - 90.5% and 87.5% respectively. With stones consisting of ammonium urate, the dissolution efficiency was 20.0%.

3. The most accurate, objective method for the diagnosis of urate stone, as well as the differential diagnosis of urate lithiasis, especially in case of suspicion of urate stone of the ureter, is a spiral computed tomography.

LIST OF REFERENCES:

1. Dzeranov N.K., Beshliev D.A. Modern percutaneous (percutaneous) treatment of nephroureterolithiasis - M., 2017.
2. Dutov B.B. Instrumental treatment of nephrolithiasis // Scientific and practical conference "Diagnostics, treatment and examination of patients with urolithiasis": Materials. - M., 2012.--S. 70-75.
3. Tiktinsky O.L., Alexandrov V.P. Efficiency and prospects of modern endourology // X Russian Congress of Urologists: Proceedings. - M. - 2017. -S. 655-684.
4. Borghi L. et al. // 1 International Consultation on Stone Disease. Paris, 3-4 July 2014, Bookofabstracts. - JV210 - P. 10.
5. Ferrari P., Bonny About. High-resolution detection of internal structure of renal calculi by helical computerized tomography // J. Urol., 2018; 167: 322-326.
6. Grases Fetal. The peroral dissolution of renal calculi // J. Urol., 2016; 104: 239.
7. Koo B.C., Burt G., Burgess N.A. Percutaneous stone surgery in the obese: outcome stratified according to body mass index // Br. J. Urol., 2018; 93 (9): 129.
8. Kursh E.D., Resnick M.I. Dissolution of uric acid calculi with systemic alkalization // J. Urol. 2014; 132: 286-287.
9. Kuruma H., Arakawa T., Kubo S et al. Ammonium acid urate urolithiasis in Japan // Int J Urol. 2016; May; 13 (5): 498-501.
10. Liebman SE, Taylor JG, Bushinsky DA Uric acid nephrolithiasis // Curr Rheumatol Rep. 2017; Jun; 9 (3): 251-7.
11. Low R.K., Stoller M.L. Uric acid-related nephrolithiasis // Urol. Clin. North. Am. 2017; 24: 135-148.
12. Mattelaer P., Schroder T., Fischer N et al. In situ extracorporeal shock wave lithotripsy of distal ureteral stones: parameters for therapeutic success // Urol. Int. 2014; No. 5 - P. 255-258.
13. Mattle D., Hess B. Preventive treatment of nephrolithiasis with alkali citrate-a critical review // Urol Res., 2018 May; 33 (2): 73-79.
14. Moran M.E., Abrahams H.M., Burday D.E. et al. Utility of oral dissolution therapy in the management of referred patients with secondarily treated uric acid stones // Urology, 2019; 59 (2): 206-210.
15. Tiselius H.G. Solubility of uric acid and monosodium urate // Med. Biol. Eng., 2018; 10: 522-531.
16. Tiselius H.G., Clinical study of uric acid urolithiasis // Kaohsiung J Med Sci., 2007; Jun; 23 (6): 298-301. 2018.

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