

Qarshiyev Bekzod O'ktam o'g'li

bekhzadkarshiyev@gmail.com

Otamurodov Ramziddin Zokirovich

otamurodovramziddin2@gmail.com

Department of Pharmacology and Clinical Pharmacology,

Termiz Branch of the Tashkent Medical Academy

Research advisor-**Chariev Muzaffar Yuldashevich**

charievmuzaffarbek@gmail.com

Termiz Branch of the Tashkent Medical Academy, Uzbekistan

ANNOTATION

Patients with renal colic are usually treated in emergency care units or by their family doctors and require immediate diagnosis and treatment. The life-time risk is up to 10 %. The prevalence amounts to 4.7 % in Germany. In addition to confirming the diagnosis and inducing an adequate pain therapy it's very important for patients to be directed correctly and, above all, prevention is important, too. Without treatment the recurrence rate ranges between 50 and 100 %. Particularly, these principals should give useful advice, wherever patients are treated without urological department.

Keywords: renal stones; ureteric stones; pyonephrosis; lithotripsy, pharmacologic, patient.

INTRODUCTION

Patients with kidney disease carry an increased medication burden compared with patients with normal kidney function, with 80% of patients taking more than 5 medications per day. The prevalence of polypharmacy increases as chronic kidney disease (CKD) stage worsens and comorbidities increase. Dialysis patients have among the highest pill burdens of any disease state, with a median of 19 pills per day and with 25% of patients exceeding 25 pills per day. Elderly patients with CKD take a median of 9 medications daily and have additive alterations in pharmacokinetics and pharmacodynamics due to advanced age plus CKD. Their risk of an adverse drug event is 3 to 10 times higher than elderly patients without CKD. A study of 83,000 veterans with a creatinine clearance (CL_{cr}) of 15-49 mL/min reported inappropriate medication dosages or contraindications to therapy in 13% to 29% of patients, clearly demonstrating the importance of a systematic approach to reviewing and managing medications in patients with reduced kidney function.

Nephrologists are frequently faced with managing a variety of medication therapies that each have their own pharmacologic considerations for maximizing benefits and minimizing risks. Compounding this challenge is the paucity of pharmacokinetic or clinical data for many medications in patients with declining kidney function. The lack of therapeutic drug monitoring and frequent difficulties with medication adherence due to polypharmacy add significant complexity to the decision-making process. This installment of the AJKD Core Curriculum in Nephrology builds upon the basic pharmacologic principles laid out in the previous Core Curriculum installment from 2005 and highlights major concepts for the most common comorbidities and medications that require special consideration in patients with declining kidney function.

Several types of stones may develop in response to urinary composition imbalances. Each case is different and necessitates highly individualized care.

Several risk factors have been clearly identified :

Dietary factors

Adjusting one's diet is often key to preventing the recurrence of kidney stones.

Genetic factors

Family antecedents exist in nearly 40 percent of cases.

Infectious factors

The enzymatic activity of certain UTI-causing bacteria such as *Proteus mirabilis*, *Klebsiella* and *Pseudomonas* can cause kidney stones to form.

Abnormal urinary pH

Overly acidic or alkaline urinary pH contributes to the development of various types of kidney stones.

Anatomical defects in the urinary tract

Certain anatomical defects in the kidneys or urinary tract contribute to urinary stasis and therefore to the formation of stones.

Infection Fever, or history suggesting fever, raises the possibility of pyonephrosis (infection above an obstructing stone). The obstructed kidney drains by means of calyceal rupture, pyelovenous and pyelolymphatic backflow. Therefore infection in an obstructed system can result in life threatening Gram negative sepsis. Antibiotics alone cannot reliably treat pyonephrosis, and urgent hospital admission for drainage of the upper tract above the stone is required. Previously, percutaneous nephrostomy under local anaesthetic was considered to be the ideal treatment, but this has recently been challenged by a randomised study demonstrating equivalent outcomes from retrograde stenting and percutaneous nephrostomy.⁸ Patients often find stents uncomfortable and complain of lower urinary tract symptoms. Despite this, stents still play an important role in the management of pyonephrosis. Following drainage and a 1–2 week course of antibiotics, these patients then need to return for definitive management of their stone and removal of the stent. There has been a reluctance of urologists to undertake 'hot' ureteroscopic laser lithotripsy in these patients for fear of worsening endotoxaemia, although the evidence for this is only Level III.⁹

Shock wave lithotripsy

Shock wave lithotripsy is the least invasive method of eliminating stones, but also the least effective. The efficacy of SWL depends on:

- stone size – less effective once stone is >1 cm, almost never used for stones >2 cm
- stone position – stone clearance rates from the lower pole are poor, particularly for stones >1 cm (20%).¹⁵ This improves to 75% for stones in the middle and upper calyces.¹⁵

Complications

- Significant pain with the passage of stone fragments is seen in 15% of patients
- Haematuria is almost universal, but is problematic for less than 1% of patients
- Perinephric haematoma is rare.

Contraindications

- Pregnancy
- Urinary tract infection
- Antiplatelet or anticoagulant drugs
- Abdominal aortic aneurysm
- Abnormalities of drainage from the kidney.

For these reasons, SWL is generally reserved for stones that are not causing any or much trouble at the time of presentation, or for patients with stones inaccessible to retrograde or percutaneous access.

ИҚТИБОСЛАР/ ЧОШКИ/ REFERENCES:

1. Lee M-C, Bariol S. Epidemiology of stone disease in Australia. In: Talati J, Tiselius H-G, Ye Z, Albala D, editors. The management of urolithiasis: the rational deployment of technology. Springer 2011; in press.

2. Messersmith WA, Brown DF, Barry MJ. The prevalence and implications of incidental findings on ED abdominal CT scans. *Am J Emerg Med* 2001;19:479– 81.

3. Saxena SK, Saxena S, Saxena R, et al. (2010) Emerging trends, challenges and prospects in antiviral therapeutics and drug development for infectious diseases. *Electronic Journal of Biology* 6: 26–31. [[Google Scholar](#)]

4. Son of Khushvaktov Ilyas Shadiqul o'g'li, son of Tugalboyev Daniyoy Abdurasulovich, and son of Khursandov Husniddin Yusubali. (2023). LEARNING THE FUNDAMENTALS OF ANTISEPTIC AND ASEPTIC. MEDICINE, PEDAGOGY AND TECHNOLOGY: THEORY AND PRACTICE, 1(4), 79–82. izvlecheno ot <https://universalpublishings.com/index.php/mpttp/article/view/3709>

5. Mirzaali Oglu, A. J., Shadiqul Oglu, X. I., Eminjon Oglu, S. H., Aliqul Oglu, N. B., & Begzod Oglu, M. M. (2022) . Importance of medical prevention in medicine. *Texas Journal of Medical Science*, 13, 175-176.

6. Mirzaali oglu, A. J., Shadiqul oglu, H. I., Fazil oglu, N. A., & Davronbek Ulugbek oglu, T. (2022). TERMINAL CASES LUNG AND HEART RESUSCITATION TRANSFER PRINCIPLES. *Galaxy International Journal of Interdisciplinary Research*, 10(10), 729-731.

7. Tashboltayevna A. S. et al. STUDY OF SEASONAL BIOLOGICAL BACTERIAL INTESTINAL INFECTIONS IN THE EXAMPLE OF ESHERICHIA //Journal of Universal Science Research. – 2023. – T. 1. – №. 3. – С. 110-115.

8. Mirzaali son A. J. et al. THE LAST BRAIN, ITS CHANGES DEPENDING ON AGE. RELIEF OF PLASH. LATERAL WHITE MATTER OF THE BRAIN. BASAL STEMS //PEDAGOG. - 2022. - T. 5. – no. 6. - S. 319-326.

9. Rakhmon Og A. M. et al. PHYSIOLOGY OF THE HEART, AUTOMATIC HEART, ELECTROCARDIAGRAM //SUSTAINABILITY OF EDUCATION, SOCIO-ECONOMIC SCIENCE THEORY. - 2022. - T. 1. – no. 4. – S. 4-8.

10. Choriyeva Z. et al. INFORMATION ON DIABETES DISEASE. THE ORIGIN OF DIABETES DISEASE AND MEASURES APPLIED IN THIS DISEASE //Theoretical aspects in the formation of pedagogical sciences. - 2022. - T. 1. – no. 4. – S. 96-99.