# Bölüm 3

# BÖBREK VE ÜRETER TAŞLARINDA MEDİKAL TEDAVİ

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## GİRİŞ

Üriner sistem taşları dünyada prevalansı %1 ile 20 arasında değişmekle birlikte bazı bölgelerde son 20 yılda giderek artmakta olan ve tedavi edilmediği durumlarda akut böbrek yetersizliği (ABY) ve/veya kronik böbrek yetersizliğine (KBY) yol açabilecek kadar önemli bir hastalıktır (1-3). Böbrek ve üreter taşlarında tedavi gerektirecek durumlar; hastanın semptom varlığı, yaşı ve fiziksel performansı, taşın boyutu, lokalizasyonu ve rekürrens riski, hasta tercihi gibi birçok faktöre bağlıdır. Tedavide diyet ve takip, medikal tedavi, ekstrakorporeyal şok dalga tedavisi (ESWL) ve cerrahi tedavi seçenekleri bulunmaktadır (4,5).

Medikal tedavinin spektrumu çok geniştir. Renal kolik vb. ağrı yaratan durumlarda analjezik tedavi olarak, 1 cm altındaki böbrek ve özellikle üreter taşlarında spontan pasajı artırma amaçlı medikal ekspulsif terapi (MET) olarak, mevcut taşların boyutlarını küçültme amaçlı sınırlı taş türlerinde kemoliz şeklinde ya da ana tedavi sonrası rekürrensin engellenmesinde medikal tedavinin yeri ve önemi büyüktür (4).

### 1.1. Analjezik tedavi

Renal kolik tedavisinde analjezik olarak çok çeşitli ilaçlar denenmiş olup ilk basamakta tercih edilmesi gereken en etkili ilaçlar nonsteroidal antienflamatuar (NSAİ) ilaçlar ve parasetamoldür. NSAİ tercih ederken hastanın allerji durumu, kardiyak ya da serebrobasküler hastalık ve ABY/KBY varlığı sorgulanmalıdır. Metamizol, diklofenak, ibuprofen, naproksen sodyum, etodolak sıklıkla tercih edilen NSAİ ilaçlardır. NSAİ ilaçlar böbrek yetersizliği olan hastalarda yetersizliği artırabilirken sağlıklı bireylerde böbrek fonksiyonlarına negatif etkisi zayıftır (6). Diklofenak ve ibuprofen kullanımı majör kardiyak hastalık geçirme riskini artırmaktadır. Koroner arter hastalığı, konjestif kalp yetersizliği, periferik arter

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## KAYNAKÇA

1. Trinchieri A. Epidemiology of urolithiasis. Arch Ital Urol Androl. 1996;68:203–250.
2. Trinchieri A. (2008). Epidemiology of urolithiasis: an update. Clinical cases in mineral and bone metabolism : the official journal of the Italian Society of Osteoporosis, Mineral Metabolism, and Skeletal Diseases, 5(2), 101–106.
3. Zhe, M., Hang, Z. Nephrolithiasis as a risk factor of chronic kidney disease: a meta-analysis of cohort studies with 4,770,691 participants. Urolithiasis, 2017. 45: 441.
4. Barnela, S. R., Soni, S. S., Saboo, S. S., et al. (2012). Medical management of renal stone. Indian journal of endocrinology and metabolism, 16(2), 236–239.
5. Zumstein, V., Betschart, P., Abt, D., et al. (2018). Surgical management of urolithiasis - a systematic analysis of available guidelines. BMC urology, 18(1), 25.
6. Lee, A., Cooper, M. G., Craig, J. C., et al. (2007). Effects of nonsteroidal anti-inflammatory drugs on postoperative renal function in adults with normal renal function. The Cochrane database of systematic reviews, 2007(2), CD002765.
7. Coxib and traditional NSAID Trialists' (CNT) Collaboration, Bhala, N., Emberson, J., Merhi, A., Abramson, S., et al. (2013). Vascular and upper gastrointestinal effects of non-steroidal anti-inflammatory drugs: meta-analyses of individual participant data from randomised trials. Lancet (London, England), 382(9894), 769–779.
8. Pathan, S. A., Mitra, B., & Cameron, P. A. (2018). A Systematic Review and Meta-analysis Comparing the Efficacy of Nonsteroidal Anti-inflammatory Drugs, Opioids, and Paracetamol in the Treatment of Acute Renal Colic. European urology, 73(4), 583–595.
9. EAU Guidelines. Edn. presented at the EAU Annual Congress Milan 2023. ISBN 978-94-92671-19-6.
10. Moussa, M., Papatsoris, A. G., & Chakra, M. A. (2021). Intradermal sterile water injection versus diclofenac sodium in acute renal colic pain: A randomized controlled trial. The American journal of emergency medicine, 44, 395–400.
11. Yilmaz, E., Batislam, E., Basar, M. M., et al. (2005). The comparison and efficacy of 3 different alpha1-adrenergic blockers for distal ureteral stones. The Journal of urology, 173(6), 2010–2012.
12. Hsu, Y. P., Hsu, C. W., Bai, C. H., et al. (2018). Silodosin versus tamsulosin for medical expulsive treatment of ureteral stones: A systematic review and meta-analysis. PloS one, 13(8), e0203035.
13. Bai, Y., Yang, Y., Wang, X., Tang, Y., Han, P., & Wang, J. (2017). Tadalafil Facilitates the Distal Ureteral Stone Expulsion: A Meta-Analysis. Journal of endourology, 31(6), 557–563. doi:10.1089/end.2016.0837
14. Cai, D., Wei, G., Wu, P., et al. (2022). The Efficacy of Mirabegron in Medical Expulsive Therapy for Ureteral Stones: A Systematic Review and Meta-Analysis. International journal of clinical practice, 2022, 2293182. doi:10.1155/2022/2293182
15. Sun, F., Bao, X., Cheng, D., et al. (2022). Meta-Analysis of the Safety and Efficacy of α-Adrenergic Blockers for Pediatric Urolithiasis in the Distal Ureter. Frontiers in pediatrics, 10, 809914. doi:10.3389/fped.2022.809914
16. Thakur, A.P.S., Sharma, V., Ramasamy, V. et al. Management of ureteric stone in pregnancy: a review. Afr J Urol 26, 60 (2020). doi:10.1186/s12301-020-00070-5

17. Kachrilas, S., Papatsoris, A., Bach, C., et al. (2013). The current role of percutaneous chemolysis in the management of urolithiasis: review and results. Urolithiasis, 41(4), 323–326. doi:10.1007/s00240-013-0575-6
18. El-Gamal, O., El-Bendary, M., Ragab, M., et al. (2012). Role of combined use of potassium citrate and tamsulosin in the management of uric acid distal ureteral calculi. Urological research, 40(3), 219–224. doi:10.1007/s00240-011-0406-6
19. Corrales, M., & Traxer, O. (2021). Can SFR (Stone Free Rate) be used as a preventive method for recurrence? Medical management of residual fragments. ¿Se puede utilizar la tasa libre de litiasis como método preventivo de recurrencia? Manejo médico de fragmentos residuales. Archivos espanoles de urologia, 74(1), 94–101.
20. Brain, E., Geraghty, R. M., Lovegrove, C. E., Yang, B., & Somani, B. K. (2021). Natural History of Post-Treatment Kidney Stone Fragments: A Systematic Review and Meta-Analysis. The Journal of urology, 206(3), 526–538. https://doi.org/10.1097/JU.0000000000001836
21. Yuvanc, E., Yilmaz, E., Tuglu, D., et al. (2015). Medical and alternative therapies in urinary tract stone disease. World journal of nephrology, 4(5), 492–499. doi:10.5527/wjn.v4.i5.492
22. Lojanapiwat, B., Tanthanuch, M., Pripathanont, C., et al. (2011). Alkaline citrate reduces stone recurrence and regrowth after shockwave lithotripsy and percutaneous nephrolithotomy. International braz j urol : official journal of the Brazilian Society of Urology, 37(5), 611–616. doi:10.1590/s1677-55382011000500007
23. Singh, I., Bishnoi, I., Agarwal, V., et al. (2011). Prospective randomized clinical trial comparing phytotherapy with potassium citrate in management of minimal burden (≤8 mm) nephrolithiasis. Urology annals, 3(2), 75–81. doi:10.4103/0974-7796.82172
24. Lee, Y. H., Huang, W. C., Tsai, J. Y., et al. (1999). The efficacy of potassium citrate based medical prophylaxis for preventing upper urinary tract calculi: a midterm followup study. The Journal of urology, 161(5), 1453–1457.
25. Pinheiro VB, Baxmann AC, Tiselius HG, Heilberg IP. The effect of sodium bicarbonate upon urinary citrate excretion in calcium stone formers. Urology. 2013 Jul;82(1):33-7. doi: 10.1016/j.urology.2013.03.002.
26. Cicerello E, Merlo F, Maccatrozzo L. Urinary alkalization for the treatment of uric acid nephrolithiasis. Arch Ital Urol Androl. 2010 Sep;82(3):145-8.
27. Cunha TDS, Gomes SA, Heilberg IP. Thiazide and thiazide-like diuretics in nephrolithiasis. J Bras Nefrol. 2021 Jan-Mar;43(1):103-109. doi: 10.1590/2175-8239-JBN-2019-0148.
28. Dhayat NA, Bonny O, Roth B, et al. Hydrochlorothiazide and Prevention of Kidney-Stone Recurrence. N Engl J Med. 2023 Mar 2;388(9):781-791. doi: 10.1056/NEJMoa2209275.
29. Peerapen P, Thongboonkerd V. Kidney Stone Prevention. Adv Nutr. 2023 May;14(3):555-569. doi: 10.1016/j.advnut.2023.03.002.
30. Canales BK, Sharma N, Yuzhakov SV, Bozorgmehri S, Otto BJ, Bird VG. Long-term Recurrence Rates in Uric Acid Stone Formers With or Without Medical Management. Urology. 2019 Sep;131:46-52. doi: 10.1016/j.urology.2019.05.023.
31. Leslie SW, Sajjad H, Nazzal L. Cystinuria. 2023 Mar 11. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan–. PMID: 29262245.

32. Rogers A, Kalakish S, Desai RA, Assimos DG. Management of cystinuria. Urol Clin North Am. 2007 Aug;34(3):347-62. doi: 10.1016/j.ucl.2007.04.006.
33. Jarrar K, Boedeker RH, Weidner W. Struvite stones: long term follow up under metaphylaxis. Ann Urol (Paris). 1996;30(3):112-7.
34. Wong H.Y., et al. Medical management and prevention of struvite stones, In: Kidney Stones. Medical and Surgical Management, Coe FL, Favus MJ, Pak CYC, Parks JH, Preminger GM., Editors. 1996, Lippincott-Raven: Philadelphia.