

BÖLÜM

13

ÜRİNER SİSTEM ENFEKSİYONLARI

*Esra TEKİN*¹

*Gülsüm ALTUNTAŞ*²

| GİRİŞ

Üriner sistem enfeksiyonları %30-40 oranıyla en sık görülen nozokomiyal enfeksiyonlardan biridir. Bu oran yoğun bakım hastalarında %8-21'dir. Avrupa'da yapılmış 1417 yoğun bakım ünitesini kapsayan geniş bir surveyans çalışmasında üriner sistem enfeksiyonları pnömoni ve alt solunum yolu enfeksiyonlarından sonra üçüncü sırada yer almaktadır (1).

Asemptomatik bakteriüriden piyelonefrit, sepsis gibi şiddetli enfeksiyonlara kadar değişen çeşitli klinik durumlarla ortaya çıkabilir.

Risk faktörleri olarak;

- Obstrüksiyon
- Hidronefroz
- Ürolojik girişime veya kalıcı katetere bağlı mukozal hasarlanma
- Uzamiş ürolojik cerrahiler
- İleri yaş
- Diabet
- Karaciğer sirozu
- Kadın cinsiyet

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KAYNAKLAR

1. Lee, J. H. *et al.* Factors that affect nosocomial catheter-associated urinary tract infection in intensive care units: 2-year experience at a single center. *Korean J. Urol.* **54**, 59–65 (2013).
2. Nicolle, L. E. Infections associated with urinary catheters. *Clin. Infect. Dis. Second Ed.* 722–727 (2015) doi:10.1017/CBO9781139855952.122.
3. Shuman, E. K. & Chenoweth, C. E. Urinary Catheter-Associated Infections. *Infect. Dis. Clin. North Am.* **32**, 885–897 (2018).
4. Shuman, E. K. & Chenoweth, C. E. Recognition and prevention of healthcare-associated urinary tract infections in the intensive care unit. *Crit. Care Med.* **38**, 373–379 (2010).
5. Keten, D. & Aktaş, F. Sondayla ilişkili üriner sistem enfeksiyonları. *Klinik Derg.* **27**, 38–47 (2014).
6. Gupta, K., Hooton, T. & Naber, K. clinical practice guidelines for the treatment of acute uncomplicated cystitis and pyelonephritis in women: a 2010 update by the Infectious Diseases Society of America. in ... *infectious diseases* (2011). doi:10.1093/cid/ciq257.
7. Flores-Mireles, A. L., Walker, J. N., Caparon, M. & Hultgren, S. J. Urinary tract infections: Epidemiology, mechanisms of infection and treatment options. *Nat. Rev. Microbiol.* **13**, 269–284 (2015).
8. STEVEN M. OPAL. *Urinary Tract Infections.* (2018).
9. Köves, B. & Wullt, B. The Roles of the Host and the Pathogens in Urinary Tract Infections. *European Urology, Supplements* (2016) doi:10.1016/j.eursup.2016.04.005.
10. Niveditha, S., Pramodhini, S., Umadevi, S., Kumar, S. & Stephen, S. The isolation and the biofilm formation of uropathogens in the patients with catheter associated urinary tract infections (UTIs). *J. Clin. Diagnostic Res.* (2012) doi:10.7860/JCDR/2012/4367.2537.
11. Jacobsen, S. M. & Shirtliff, M. E. *Proteus mirabilis* biofilms and catheter-associated urinary tract infections. *Virulence* (2011) doi:10.4161/viru.2.5.17783.
12. STEVEN M. OPAL. Urinary Tract Infections. in *Irwin&Rippe's intensive care medicine eighth edition* 2720–21 (2018).
13. Kamoun, M. *et al.* Complicated urinary tract infections associated with diabetes mellitus: Pathogenesis, diagnosis and management. *Indian J. Endocrinol. Metab.* **17**, 442 (2013).
14. Colpan, A., Akinci, E., Erbay, A., Balaban, N. & Bodur, H. Evaluation of risk factors for mortality in intensive care units: A prospective study from a referral hospital in Turkey. *Am. J. Infect. Control* (2005) doi:10.1016/j.ajic.2004.09.005.
15. Chenoweth, C. E. *Urinary Tract Infections.* *Infect. Dis. Clin. NA* **30**, 869–885 (2016).
16. Çelik, S., Karaman, D., Yanık, F., Veren, F. & Yoğun, B. Catheter Related Urinary Tract Infections. **0**, 215–220 (2011).
17. Saint, S. *et al.* Introducing the no preventable harms campaign: Creating the safest health care system in the world, starting with catheter-associated urinary tract infection prevention. *Am. J. Infect. Control* **43**, 254–259 (2015).
18. Wagenlehner FM, N. K. Hospital-acquired urinary tract infections. *Hosp Infect* **46**, 171–81 (2000).
19. Burke JP, Z. D. Nosocomial urinary tract infections. In: Mayhall CG, ed. *Hospital Epidemiology and Infection Control.* in *Lippincott Williams and Wilkins* 173–187 (1999).
20. Saint, S. *et al.* A program to prevent catheter-associated urinary tract infection in acute care. *N. Engl. J. Med.* **374**, 2111–2119 (2016).
21. Darouiche, R. O. Device-Associated Infections: A Macroproblem that Starts with Microadherence. *Clin. Infect. Dis.* (2001) doi:10.1086/323130.
22. Fink, R. *et al.* Indwelling urinary catheter management and catheter-associated urinary tract infection prevention practices in Nurses Improving Care for Healthsystem Elders hospitals. *Am. J. Infect. Control* (2012) doi:10.1016/j.ajic.2011.09.017.
23. Türger Ö. Değişen CDC tanımları: üriner kateterle ilişkili enfeksiyonlarNo Title. in *III. Sağlık Bakımıyla ilişkili İnfeksiyonlar Simpozumu (7-9 Mart 2014, İstanbul) Kitabı.* 78–89 (2014).
24. Richards, M. J., Edwards, J. R., Culver, D. H., Gaynes, R. P. & Surveillance, I. Nosocomial Infections in Combined Medical-Surgical Intensive Care Units in the United States. **21**, 510–515 (2010).
25. Turgut, H. *et al.* Evaluation of device associated infection rates in intensive care units of Pamukkale University Hospital. *Infection* **36**, 262–265 (2008).

26. Bouza, E., San Juan, R., Muñoz, P., Voss, A. & Kluytmans, J. A European perspective on nosocomial urinary tract infections II. Report on incidence, clinical characteristics and outcome (ESGNI-004 study). *Clin. Microbiol. Infect.* 7, 532–542 (2001).
27. Zou, H. & Li, G. Diagnosis, prevention, and treatment of catheter-associated urinary tract infection in adults: 2009 international clinical practice guidelines from the Infectious Diseases Society of America. *Chinese Journal of Infection and Chemotherapy* (2010) doi:10.1086/650482.
28. Kauffman, C. A. et al. Prospective Multicenter Surveillance Study of Funguria in Hospitalized Patients. *Clin. Infect. Dis.* (2000) doi:10.1086/313583.
29. Sobel, J. D. et al. Candiduria: A Randomized, Double-Blind Study of Treatment with Fluconazole and Placebo. *Clin. Infect. Dis.* (2000) doi:10.1086/313580.
30. Kojic, E. M. & Darouiche, R. O. Candida Infections of Medical Devices. *Clinical Microbiology Reviews* (2004) doi:10.1128/CMR.17.2.255-267.2004.
31. Denning, D. W. Echinocandin antifungal drugs. *Lancet* (2003) doi:10.1016/S0140-6736(03)14472-8.
32. Bougnoux, M. E. et al. Candidemia and candiduria in critically ill patients admitted to intensive care units in France: Incidence, molecular diversity, management and outcome. *Intensive Care Med.* 34, 292–299 (2008).
33. Sorbera, M., Chung, E., Ho, C. W. & Marzella, N. Ceftolozane/tazobactam: A new option in the treatment of complicated gram-negative infections. *P T* (2014).
34. Lagacé-Wiens, P., Walkty, A. & Karlowsky, J. A. Ceftazidime-avibactam: An evidence-based review of its pharmacology and potential use in the treatment of Gram-negative bacterial infections. *Core Evidence* (2014) doi:10.2147/CE.S40698.
35. Bonkat, G. et al. Management of Urosepsis in 2018. *Eur. Urol. Focus* 5, 5–9 (2019).
36. Rhodes, A. et al. Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016. *Critical Care Medicine* (2017) doi:10.1097/CCM.0000000000002255.