



Racionalni terapijski pristup asimptomatskoj bakteriuriji i kandiduriji

Rational Therapeutic Approach to Asymptomatic Bacteriuria and Candiduria

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Apstrakt

Asimptomatska bakteriurija (ABU) predstavlja prisustvo značajnog broja uropatogena u adekvatno uzorkovanom urinu, uz izostanak pojave pratećih simptoma i znakova urinarnе infekcije. Učestalost u populaciji varira u zavisnosti od pola, starosti, prisustva komorbiditeta, ali i drugih faktora. Najčešće izolovan uzročnik ABU je *Escherichia coli*, a potom slede ostale enterobacteriaceae, različite enterococcus vrste, streptococcus grupe B, kao i *Pseudomonas aeruginosa*. Shodno aktuelnim smernicama, antibiotski terapijski pristup asimptomatskoj bakteriuriji ne smatra se klinički opravdanim postupkom, osim u određenim izuzecima. Prisustvo ABU u trudnoći se u oko 20–30% netretiranih slučajeva komplikuje razvojem akutnog pijelonefritisa, naročito krajem drugog i početkom trećeg trimestra, čime može biti udruženo sa intrauterinim zastojem u rastu, prevremenim porođajem, odnosno neonatalnom smrću. Oralna primena „bezbednih“ antimikrobnih lekova u trudnoći u ovakvim slučajevima smatra se opravdanom, s obzirom na to da tretman ABU smanjuje učestalost razvoja akutnog pijelonefritisa na svega 2–3%. Pogodnim terapijskim pristupom smatra se i primena antimikrobnih lekova u sklopu pripreme pacijenta za invazivne genitourinarne procedure. Mada su stavovi još uvek neusaglašeni, poseban aspekt u domenu neophodnosti primene i izbora antibiotika pripada asimptomatskoj bakteriuriji kod pacijenata sa transplantiranim bubregom, naročito u periodu od meseca nakon intervencije, shodno činjenici da je manifestna infekcija urinarnog trakta, kao jedna od najčešćih visokorizičnih komplikacija kod ovakvih pacijenata, udružena sa posledičnom disfunkcijom grafta, sepsom, kao i visokim mortalitetom. U slučajevima prisustva asimptomatske bakteriurije kod dece, osoba starije životne dobi, dijabetičara, pacijenata sa povredom kičmene moždine, odnosno u okolnostima potrebe za permanentnom kateterizacijom mokraćne bešike, primena antibiotske terapije ne smatra se racionalnim terapijskim izborom. Upotreba antimikrobnih lekova u ovakvim situacijama nije udružena sa redukcijom učestalosti razvoja simptomatskih infekcija urinarnog trakta, dok sa druge strane, može biti u korelaciji sa rastom verovatnoće razvoja neželjenih efekata ovih medikamenata i razvojem bakterija otpornih na antibiotike.

Poznat je relativno veliki broj faktora rizika za razvoj kandidurije (plasiran urinarni kateter, prethodna primena antibiotika, starost pacijenta, dijabetes melitus, prethodni operativni zahvat, poremećaji na nivou genitourinarnog trakta), ali jasni di-

Abstract

Asymptomatic bacteriuria (ABU) is the presence of a significant number of uropathogens in adequately sampled urine, without accompanying symptoms and signs of urinary infection. The frequency in the population varies depending on gender, age, the presence of comorbidities, and other factors. The most frequently isolated causative agent of ABU is *Escherichia coli*, followed by other Enterobacteriaceae, various enterococcus species, group B streptococcus, and *Pseudomonas aeruginosa*. According to current guidelines, the antibiotic therapeutic approach to asymptomatic bacteriuria is not considered a clinically justified procedure, except in certain exceptions. The presence of ABU in pregnancy in about 20–30% of untreated cases is complicated by the development of acute pyelonephritis, especially at the end of the second and beginning of the third trimester, which can be associated with intrauterine growth retardation, premature birth, or neonatal death. Oral administration of “safe” antimicrobial drugs during pregnancy in such cases is considered justified, considering that the treatment of ABU reduces the frequency of development of acute pyelonephritis to only 2–3%. The use of antimicrobial drugs as part of patient preparation for invasive genitourinary procedures is considered a suitable therapeutic approach. Although the attitudes are still opposed, a special aspect in the domain of the necessity of application and choice of antibiotics belongs to asymptomatic bacteriuria in patients with a kidney transplant, especially in the period of one month after the intervention, according to the fact that urinary tract infection is manifest, as one of the most common high-risk complications in such patients, associated with subsequent graft dysfunction, sepsis, as well as high mortality.

In cases of asymptomatic bacteriuria in children, elderly people, diabetics, and patients with spinal cord injury, i.e. in the circumstances of the need for permanent catheterization of the urinary bladder, the use of antibiotic therapy is not considered a rational therapeutic choice. The use of antimicrobial drugs in such situations is not associated with a reduction in the frequency of the development of symptomatic urinary tract infections, while on the other hand, it may be correlated with an increase in the likelihood of the development of side effects of these drugs and the development of bacteria resistant to antibiotics.

A relatively large number of risk factors for the development of candiduria are known (placed urinary catheter, previous ad-



jagnostički kriterijumi za verifikovanje postojanja infekcije još uvek nisu u potpunosti definisani. Takođe, kandidurija ne mora inicijalno da bude udružena sa kandidemijom i uglavnom je asimptomatska. Klinička efikasnost eradikacije kandidate u domenu asimptomatske kandidurije u većini slučajeva nije dokazana, shodno čemu se suzdržavanje od primene antigljivične terapije kod ovakvih pacijenata može uglavnom smatrati opravdanom terapijskom opcijom.

Prisustvo bakterija i gljivica (*Candida-e*) u urinu ne smatra se inicijalno znakom bolesti, shodno čemu je individualni terapijski pristup zasnovan na aktuelnim smernicama, a naročito postojanju specifičnih indikacija, osnov racionalnog terapijskog pristupa kod pacijenata sa asimptomatskom bakteriurijom i kandidurijom.

Ključne reči: asimptomatska bakteriurija, asimptomatska kandidurija, terapijski pristup

ministration of antibiotics, age of the patient, diabetes mellitus, previous surgery, disorders at the level of the genitourinary tract), but clear diagnostic criteria for verifying the existence of infection have not yet been fully defined. Also, candiduria does not have to be initially associated with candidemia and is mostly asymptomatic. The clinical effectiveness of candida eradication in the domain of asymptomatic candiduria has not been proven in most cases, so refraining from the use of antifungal therapy in such patients can generally be considered a justified therapeutic option.

The presence of bacteria and fungi (*Candida*) in the urine is not initially considered a sign of disease, therefore an individual therapeutic approach based on current guidelines, and especially the existence of specific indications, is the basis of a rational therapeutic approach in patients with asymptomatic bacteriuria and candiduria.

Key words: asymptomatic bacteriuria, asymptomatic candiduria, therapeutic approach