Management of Urinary Tract Infections in Pregnancy

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ABSTRACT

Urinary tract infection (UTI) is the most common bacterial infection found in pregnant women. UTI is a condition in which bacteria or microbes grow and multiply in the urinary tract. Anatomical and physiological changes during pregnancy such as urinary stasis and vesicoureteric reflux will make pregnant women easier to developing UTI. In general, the management of UTI is by antibiotics. The administration of antibiotics is adjusted according to the type of UTI in the patient and based on the results of the sensitivity of urine culture. So it is very important to identify the type of UTI in diagnosis and management of UTI in pregnancy.

Keywords: Antibiotics, management, urinary tract infection.

I. INTRODUCTION

Urinary tract infection (UTI) is one of the most common infections in pregnant women. UTI is a condition in which bacteria or microbes grow and multiply in the urinary tract. Anatomical and physiological changes during pregnancy such as urinary stasis and vesicoureteric reflux will make pregnant women easier to developing UTI. In general, the management of UTI is by antibiotics. The administration of antibiotics is adjusted according to the type of UTI in the patient and based on the results of the sensitivity of urine culture. So it is very important to identify the type of UTI in diagnosis and management of UTI in pregnancy.

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present, further examination in the form of a bacterial sensitivity test is necessary and further antibiotics are given. In addition to antibiotics, antipyretics and analgesics can be given to reduce other symptoms experienced by the patient [4].

II. MANAGEMENT

A. Asymptomatic Bacteriuria

Asymptomatic bacteriuria is a type of UTI that is often experienced by pregnant women. Asymptomatic bacteriuria can be established if $10^5$ /mL bacteria are found in the midstream urine specimen and on urinalysis there can be leukocytes, but there are no accompanying urinary tract infection symptoms. Antibiotics are said to be effective in asymptomatic bacteriuric UTIs in pregnancy and can reduce the incidence of pyelonephritis as well as prematurity and dysmaturity [5].

In pregnant women with symptomatic bacteriuria UTI, one of the following antibiotics can be given, namely amoxicillin 500 mg, ampicillin 250 mg, cephalosporin 250 mg, ciprofloxacin 250 mg or 500 mg, nitrofurantoin 50-100 mg, trimethoprim-sulfamethoxazole 160/800 mg. The selection of the right antibiotic given to the patient must be adjusted to the results of the sensitivity test and urine culture. If the urine culture results show Group B Streptococci, the therapy that can be given is intravenous antibiotics during delivery to prevent sepsis which is at risk for pregnant patients infected with Group B Streptococci and their fetuses. In contrast to pyelonephritis in non-pregnant patients, the use of fluoroquinolones and aminoglycosides in pregnant women should be avoided because they can cause side effects to the fetus [6].

B. Pyelonephritis

Pyelonephritis is part of the upper UTI with symptoms in the form of pelvic pain, tenderness of the costovertebral angle, fever >38 °C, diarrhea, nausea and vomiting, abdominal pain and confirmed by the finding of bacteriuria. The results of urine culture examination revealed bacteriuria and leukocyte cylinders were found on the urinalysis results. Patients with pyelonephritis in pregnancy are serious and require hospitalization. Intravenous antibiotics are given until the patient is afebrile for 24 to 48 hours and has improved symptoms. Intravenous antibiotics can use ceftriaxone, amoxicillin-clavulanate or ampicillin plus gentamicin. Oral antibiotics can be given if the patient has no fever. Oral antibiotics are given based on urine culture results and are given for 10-14 days. 2nd or 3rd generation cephalosporins are the drugs of first choice and amoxicillin is the second choice for the treatment of pyelonephritis during pregnancy [7].

C. Cystitis

Cystitis is part of the lower UTI with signs of dysuria, frequency, urgency, suprapubic pain, and cloudy urine with an unpleasant odor. Dysuria can also occur due to vaginitis or urethritis, to distinguish it can be seen from urine culture and urinalysis. Cystitis is established when a pregnant woman with symptomatic UTI is found to have quantitative culture $>10^5$ cfu/mL or $>10^3$ cfu/mL and pyuria.

Management of cystitis in pregnancy begins with empiric antibiotics and is continued with urine culture and therapy according to culture results. Amoxicillin or nitrofurantoin is the drug of first choice that can be given to the patient, but nitrofurantoin should not be used before delivery. Pregnant women with cystitis are usually advised to be hospitalized for 3–7 days [8].

III. MANAGEMENT OF RECENT UTI IN PREGNANCY

Recurrent UTIs in pregnancy occur in 4-30% of pregnancies and tend to recur 3 months after the first infection. Defined as a UTI that has occurred for the first time in the pregnant woman and has a history of UTI before or during pregnancy [9].

Prevention of recurrent UTIs in pregnancy is highly recommended because of the complications that can occur later. Antibiotics can be given continuously or post-coitus. The use of antibiotics is based on suspicion of the cause of the UTI. Nitrofurantoin or cephalexin can be given to pregnant women, except at 4 weeks before delivery. Continuous use or post-coitus with a dose of nitrofurantoin 50-100 mg and cephalexin 250-500 mg [10].

Non-pharmacological interventions that can be given are cranberry consumption, acupuncture and lifestyle modification. Lifestyle modifications in the form of ensuring hygiene and reducing bacterial contamination from the urethral meatus, not holding urine, urinating after sexual activity and starting the bath by cleaning the urethral meatus [11].

IV. CONCLUSION

Urinary tract infection (UTI) is one of the most common infections in pregnant women. Urinary tract infection (UTI) is a condition in which germs or microbes grow and multiply in the urinary tract in significant numbers. UTI can be classified based on the presence or absence of symptoms, namely asymptomatic UTI (asymptomatic bacteriuria) and symptomatic UTI (symptomatic bacteriuria), based on the location of infection, namely upper UTI (pyelonephritis and ureteritis) and lower UTI (cystitis and urethritis), and based on the presence or absence of other factors. complications. The principle of UTI management in pregnancy is UTI screening at the time of antenatal check-up and prompt and appropriate administration of antibiotics to prevent complications that can occur to the mother and baby.

REFERENCES


