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Incidence of urinary tract infections in pregnant women in a tertiary care hospital

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ABSTRACT

Urinary tract infections (UTIs) are a common problem in pregnant women. UTIs are of special significance in pregnancy because of the severe complications they cause to the mother and the baby. 240 antenatal women with symptoms and signs of UTI were included in this study carried out from June 2011 to November 2012 at Shadan Institute of Medical Sciences & P.G Research centre. The midstream samples of urine were collected and sent for culture and antibiotic sensitivity. Significant bacteriuria was found in 18 out of 240 urine samples. Of these 18 isolates, Escherichia coli was found to be the commonest causative organism.

Keywords: UTI, Escherichia coli, Amikacin

INTRODUCTION

UTI has an estimated annual global incidence of 250 million[1]. UTI is more common in females as factors like short urethra, pregnancy and easy contamination of the urinary tract with fetal contamination make them susceptible. In pregnancy, additional factors like increased bladder volume with decreased tone, decreased urethral tone cause urinary stasis[2].

In pregnancy, asymptomatic bacteriuria is seen in 3-12% of women and symptomatic bacteriuria occurs in 1-19% of women[3,4].

If untreated, UTI during pregnancy causes complication like acute pyelonephritis anemia, sepsis, renal failure and shock [5,6] and foetal complication like IUGR, acute respiratory distress syndrome and prematurity[7].

MATERIALS AND METHODS

Pregnant women attending the antenatal clinic at Shadan Institute of Medical Sciences & P.G Research Centre, who had symptoms and signs of UTI, were included in the study. Midstream specimens of urine was collected from 240 patients and sent for culture and antibiotic sensitivity.

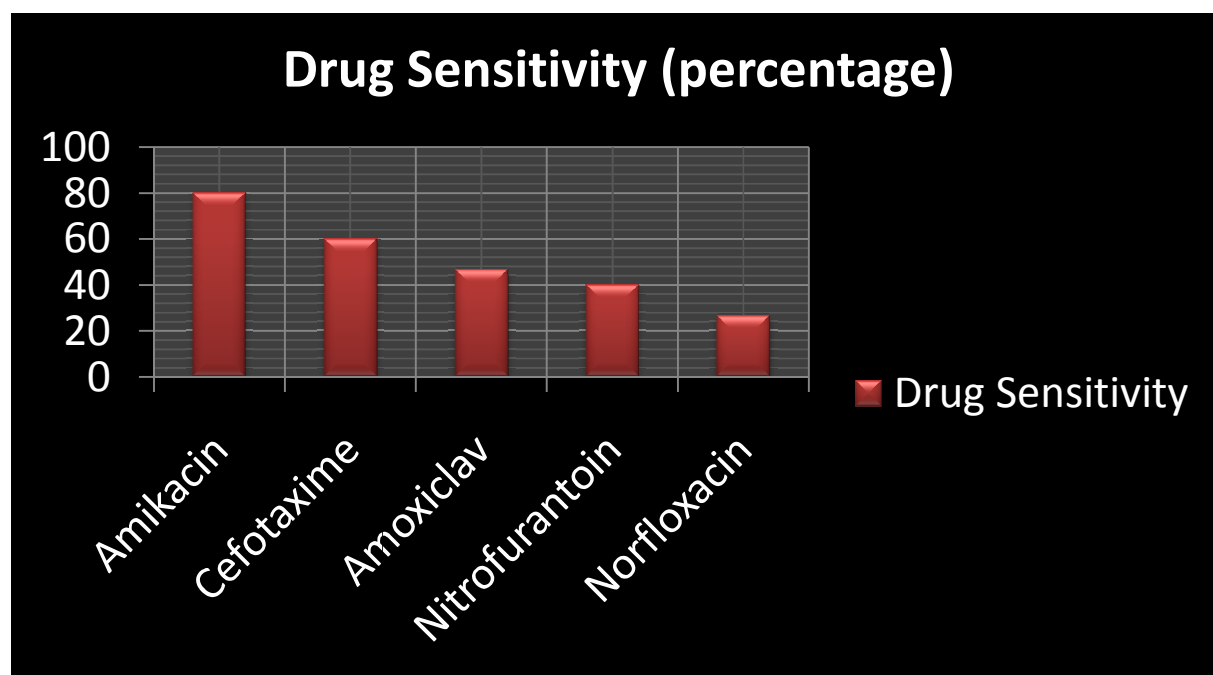
RESULTS

Of the 240 urine samples tested, significant bacteriuria was noted in 18 specimens of the 18 bacteria isolates, *Escherichia coli* was the most common one seen in 12 isolates (66.67%).

Uropathogens	Number of Isolates	Percentage
<i>Escherichia coli</i>	12	66.67%
<i>Klebsiella species</i>	3	16.67%
<i>Staphylococcus aureus</i>	2	11.11%
<i>Proteus species</i>	1	5.55%

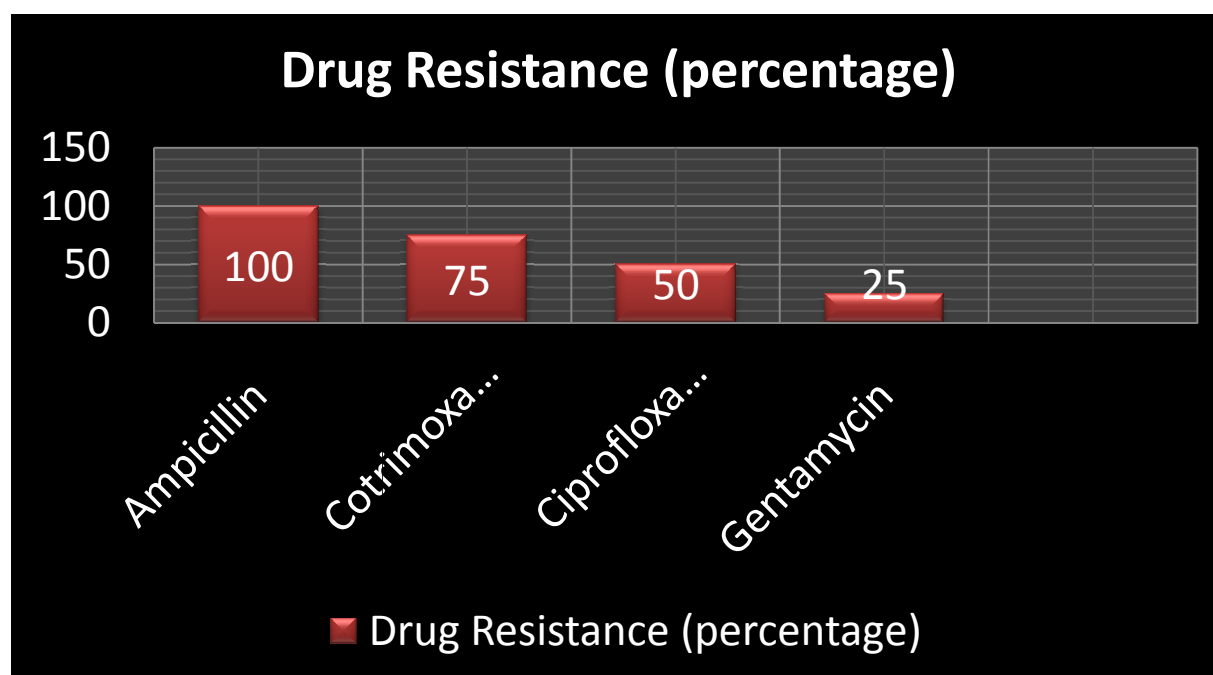
The antibiotic sensitivity pattern showed that they were sensitive to Amikacin, Cefotaxime, Amoxiclav, Nitrofurantoin and Norfloxacin in that order.

Drug	% of Sensitivity
Amikacin	80%
Cefotaxime	60%
Amoxiclav	46.66%
Nitrofurantoin	40%
Norfloxacin	26.66%



They were resistant to Ampicillin, Cotrimoxazole, Ciprofloxacin and Gentamycin in that order.

Drug	% of Resistance
Ampicillin	100%
Cotrimoxazole	75%
Ciprofloxacin	50%
Gentamycin	25%



DISCUSSION

UTI is caused by several microorganisms. *Escherichia coli* was the predominant organisms isolated (66.67%) . *Klebsiella spp* was seen in 16.67% of cases in most other studies the report was similar[8].

Although the spectrum of agents causing UTI in pregnant women is relatively constant, their antibiotic susceptibility patterns are different in different geographical locations, Cotrimoxazole in the present study was no longer found to be effective for UTI as 75% of uropathogens showed high degree of resistance to it. Previously this antibiotic was used as the drug of choice for empirical treatment of UTI.

Ampicillin and Cotrimoxazole the two common drugs used in the treatment of UTI was found to be resistant in our study .

The most useful drugs in this study were amikacin, cefotaxime, amoxiclav, nitrofurantoin and norfloxacin in that order. Most of the organisms were sensitive to amikacin[9].

This is comparable to previous study[9].

CONCLUSION

Escherichia coli was found to be the commonest uropathogen in pregnant women, and amikacin was found to be the drug of choice in these cases.

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