

**INCIDENCE OF URINARY TRACT INFECTION (UTI)
AMONG PREGNANT WOMEN IN ILE-IFE, NIGERIA.**

BY

ADEBAYO OLUWABANWO JAMES

B.Sc. (Ife)

**A DISSERTATION SUBMITTED IN PARTIAL
FULFILMENT OF THE REQUIREMENTS FOR THE
AWARD OF THE MASTERS OF SCIENCE,
DEPARTMENT OF MICROBIOLOGY, OBAFEMI
AWOLOWO UNIVERSITY, ILE-IFE, NIGERIA.**

2008

ABSTRACT

This study investigated the incidence of urinary tract infection among pregnant women. It determined the current microbial isolates that are responsible for infection as well as their susceptibility to antibiotics. The period or trimester when pregnant women are prone to urinary tract infection and the age range when infection is prevalent were also determined, this was with a view to providing information that will prevent complications in pregnancy arising from urinary tract infection.

Urine samples were obtained from 300 randomly selected pregnant women attending the Antenatal Clinic of Obafemi Awolowo University Teaching Hospital Complex Ile Ife. Each patient was given a sterile, wide-necked, leak proof container and requested to give 10-20 ml sample of mid-stream urine with little or no contamination and provide information on the month or term of pregnancy. The samples were then labelled with the date, the name of the patient and time of collection. Thereafter the specimen was transferred to the laboratory. The freshly collected clean-catch midstream urine was mixed by gently rotating the container. Using a sterile calibrated wire loop that holds 1/1000 ml (0.001 ml), a loopful of urine was inoculated into cystine lactose electrolyte-deficient (CLED) agar, chocolate agar and MacConkey agar. The plates were then incubated at 37°C for 24 hours. The organisms that were isolated from colonies on these media were subsequently identified and characterized using various biochemical tests, while their antibiotic sensitivity patterns were determined using the agar-disc diffusion method.

This result showed that 34.3 % of pregnant women examined had significant bacteriuria suggestive of UTI. The most frequent isolate was *Escherichia coli* (41.7 %), followed by *Staphylococcus aureus* (26.2 %), *Klebsiella* spp. (8.7 %), *Proteus mirabilis* (6.8 %), *Candida albicans* (9.7 %), *Pseudomonas aeruginosa* (2.9 %) and *Streptococcus faecalis* (3.9 %). Urinary tract infection was common in the last trimester of pregnancy among the younger age group of 17 to 26 years. Antibiotic sensitivity tests showed that the Gram negative isolates were sensitive to nitrofurantoin, gentamicin, nalidixic acid and ofloxacin, while the Gram-positive isolates were sensitive to gentamicin, erythromycin and cloxacilin. High antibiotic resistance was observed by the urinary bacterial isolates to most of the antibiotics used, these however cannot be referred to as multiple antibiotic resistance. *Klebsiella* spp, *P. mirabilis*, *P. aeruginosa* and *S. aureus* were resistant to the following antibiotics, amoxycillin, cotrimoxazole, augmentin and tetracycline. *E. coli* was resistant to amoxicillin and cotrimoxazole while *S. faecalis* showed strong resistance to tetracycline.

The study concluded that the leading microbial strains responsible for urinary tract infection among pregnant women at Ile Ife were *Escherichia coli*, *Klebsiella* and *Staphylococcus aureus* and most of the isolates were sensitive to nitrofurantoin, gentamicin and nalidixic acid.