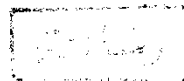


**MICROBIOLOGICAL STUDIES ON
COLIFORM GROUP**

By



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B.Sc. (Agric. Microbiology), Fac. Agric.,
Ain Shams University (1989)

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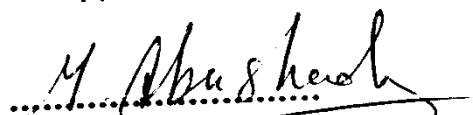
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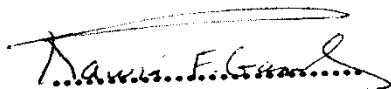
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ABSTRACT

Manal Abd El-AAl Araby "Microbiological studies on coliform group", unpublished Master of Science, University of Ain Shams, Faculty of Agriculture, Department of Microbiology, 1999.

In order to know the microbiological studies of coliform group in urine and their interaction with other urinary pathogen strains, thirty four urine specimens were collected under sterile conditions from the male and female human suffering from urinary tract infection. The highest urinary tract infection in male and female groups were causative by the high incidence of *Escherichia coli* $(1.35 \pm 0.22) \times 10^5$ CFU/ml and $(1.26 \pm 0.14) \times 10^5$ CFU/ml respectively. The highest incidence of coliform group was noticed in group ranged <20-40 years, their incidence were decreased by increasing age. *E. coli* was the commonest cause of urinary tract infection followed by *Pseudomonas aeruginosa*, *Candida albicans*, *Enterobacter cloacae*, *Proteus mirabilis*, *Klebsiella pneumonia pneumonia*, *Klebsiella pneumonia ozoenae* and *Staph. aureus*. Positive correlation in urine samples were noticed between albumin and each of age, turbidity, pH, and epithelial cells. Among fifteen antibiotics, Tarivid (OFX₁₀) gave high efficacy being 90% against 30 isolated urinary pathogen strains. The behaviour of urinary pathogen strains were studied on different media at different pH values. *E. coli* F₂₅ gave high antagonistic activity against the growth of *En. cloacae* F₁₇, *Pr. mirabilis* M₄, *Ps. aeruginosa* F₂₉, *Staph. aureus* F₁₈ and *C. albicans* F₃₂ in decreasing order. The specific growth rates (μ) of the urinary pathogen strains (UPS) were higher in the presence of glucose. The incidence of some urinary pathogen strains (UPS) i.e *E. coli*, *Pr. mirabilis* and *En. cloacae* varied the chemical and physical properties of urine. The interaction between the urinary pathogen strains in

diabetic urine proved that *En. cloacae* was superior in suppression the growth of *E. coli* and *Candida albicans*.

Results of this study would reveal the dominant causative urinary pathogen strains, interaction between coliform group and other urinary pathogen strains (UPS).

Key Words: Urinary pathogens, urinary tract infections, UTI, Coliform group, Urinary pathogen strains (UPS), Antibiotics, growth parameters, Antagonism

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