PREVALENCE OF SIGNIFICANT BACTERIURIA AMONG WOMEN DELIVERED BY CESARAEN SECTION AT AIN-SHAMS UNIVERSITY MATERNITY HOSPITAL

Thesis
Submitted for Partial Fulfilment of
Master Degree in Epidemiology

Presented By
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AIN-SHAMS UNIVERSITY
FACULTY OF MEDICINE
DEPT. OF COMMUNITY, ENVIRONMENTAL
AND OCCUPATIONAL MEDICINE

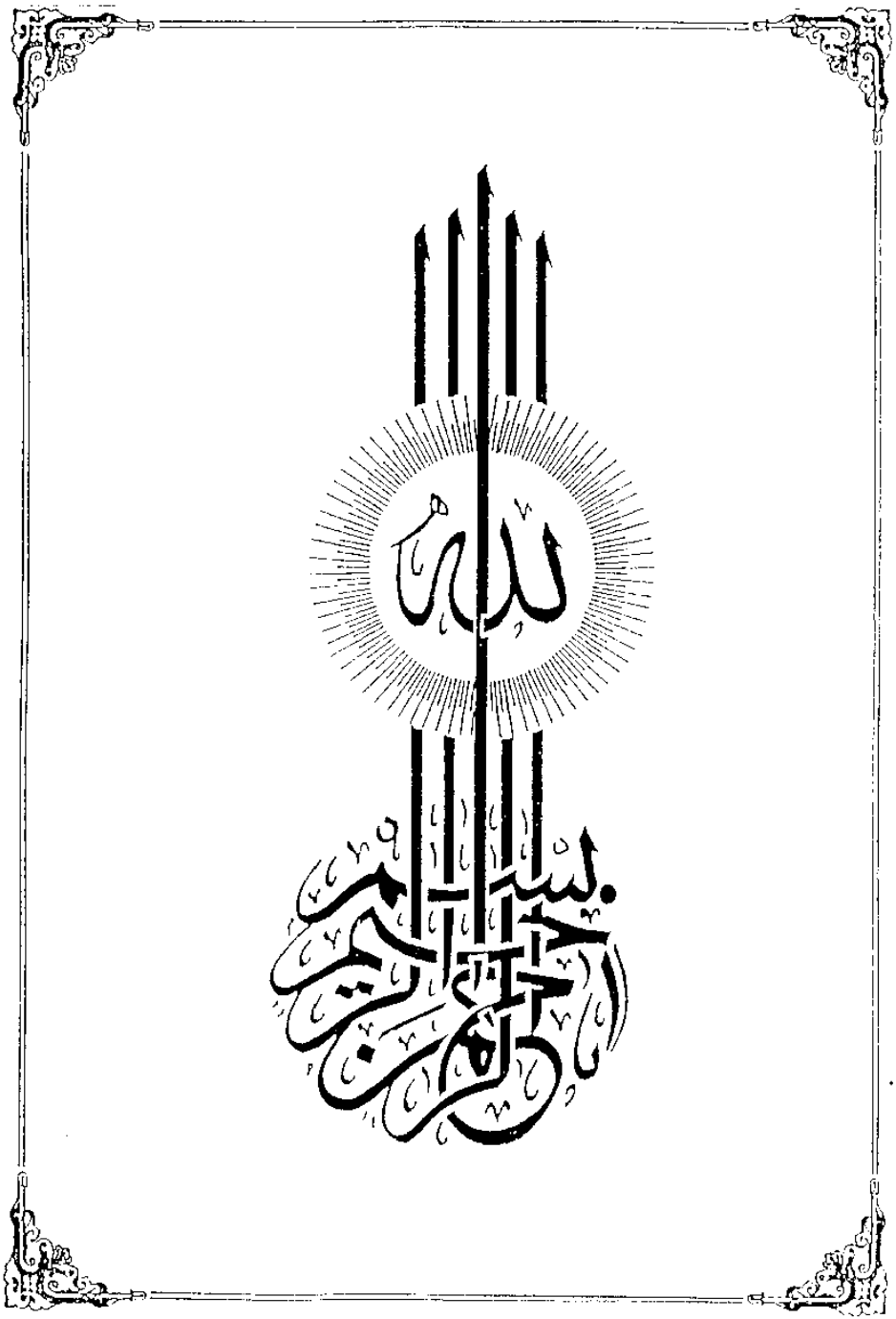
(1988)

بسم الله الرحمن الرحيم

ذلكما مما علمني ربي

سورة يوسف أيه "٣٧"

صدق الله العظيم



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C O N T E N T S

FOREWORD

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Pregnancy is a well known condition associated with asymptomatic bacteriuria and acute pyelitis (Raitz and Hodder 1961, Norden and Kass 1968). Urinary tract infection during pregnancy can be a cause of significant maternal and fetal morbidity (Gilstrap et al 1981, Cunningham et al 1984). In its severest form, acute pyelonephritis and the resultant endotoxaemia can lead to multiple maternal organ-system failures (Hankins and Whalley 1958). Approximately 20-30% of pregnant women with asymptomatic bacteriuria detected early in pregnancy, if left untreated, will have acute pyelonephritis later in pregnancy which poses a serious threat to both maternal and fetal well being (Hankins and Whalley 1985).

Colonization of the external meatus of the urethra in females by bacterial flora from the anal area has been well documented (Stamey and Sexton 1975). Catheterization may further increase the incidence of colonization of the urinary tract with bacteria causing subsequent infection (Beeson 1958, Brumfitt et al 1961, Kunin and McCormack 1966). Brumfitt et al in 1961 showed that postpartum bacteriuria was much more common in women catheterized at delivery than from those delivered without routine catheterization.

Urinary catheterization is the predisposing factor most frequently associated with septicemia caused by Gram-negative organisms which is a serious disease (Martin and Bookrajian 1962).

Patients undergoing Cesaraen section (c.s.) are frequently catheterized before the operation and the catheter may be even fixed for a certain time.

It was noticed by some obstetricians (personal communications) at Ain-Shams University Hospital that postoperative urinary tract infection (UTI) is in excess of a normal pattern, therefore the present study was planned to investigate this problem as a primary step for prevention.

OBJECTIVES OF THE STUDY

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In this work it was aimed to study:

1- Bacteriuria in women delivered at Ain-Shams University Maternity Hospital.

2- The relationship between urinary catheters insersion and bacteriuria in this group.

3- The types of bacteria causing urinary tract infection.

In order to have guidelines to guard against, or minimize such infections, recommendation for prevention of such infections (especially catheter-related infections) is the ultimate goal of the study.

INTRODUCTION

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Urinary tract infection (UTI) is one of the most common diseases in our community.

It is estimated that 10-20% of women with otherwise normal urinary tracts will have at least one UTI during their life time, and that many will have repeated infections (Santoro and Kaye, 1978).

Urinary tract infections are among the most frequently encountered problems in primary care practice, second only to upper respiratory infections (Quintiliani 1980). UTIs also represent the most common disorders affecting the genitourinary tract, and they remain the most common nosocomial infections, accounting for as much as 40% of such infections most of which are associated with indwelling bladder catheters(Buck and Price, 1977, and Stark and Maki 1984).

In women, where the incidence of UTI is 10 times that of men; (because of the short, and straight urethra in females). UTIs increase from 2% incidence in children to 10% in 70-year-old female patients (Javetz, Krupp and Chetlim, 1976). The majority of UTI are caused by gram-negative bacteria, (enterobactericae) primarily Escherichia coli (up to 85%), followed by species of Klebsiella and Proteus, and by Enterobacter aerogenes (Quintiliani 1980).

Eradicating these infections often represents a clinical challenge, with relapses and reinfections occurring frequently. Since UTIs follow an ascending route, serious involvement of the kidney is possible. Eradicating the causative organism, minimizing the danger of recurrent or chronic infection, and symptomatic relief are the goals of therapy in UTI (Quintillani 1980).

Clinically evident urinary tract infections associated with the use of temporary indwelling bladder catheters invariably are preceded by asymptomatic colonization of the urine with potenially pathogenic bacteria. As many as 25 percent of the patients with catheter - associated bacteriuria may suffer symptomatic infections and their complications, which may include bacteremia, septic shock and even death (Burke et al 1982). Current methods for the prevention of these infections have been directed primarily at aseptic catheter care techniques and reducing catheter use (Turck and Stamm 1981).

Because preventive efforts must be directed at large numbers of patients even simple devices or recommended procedures may add impressive costs to the health care budget of the nation if these are done for every catheterized patient. Therefore the cost-effectiveness of widely recommended procedures must be studied (Burke et al 1982).

REVIEW OF LITERATURE