PREVALENCE OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) INFECTIONS IN AIN SHAMS UNIVERSITY HOSPITALS

THESIS

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بسم الله الرحمن الرحيم

﴿ قالوا سبحانك لا علم لنا إلا ما
علمتنا إنك أنت العليم الحكيم ﴾

البقرة (٣٢)

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INTRODUCTION

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Methicillin-resistant Staphylococcus aureus (MRSA) emerged as a nosocomial pathogen in the early 1960s ***(Barker, 1961).***

No antibiotic resistance marker has distinguished a species more than methicillin-resistance has for S. aureus. The rapidity with which methicillin resistance developed in Europe after the introduction of methicillin and the subsequent spread of the organism throughout the world have created therapeutic problems for physicians, management difficulties for nurses and confusion for infection control practitioners ***(Mulligan et al., 1993).***

MRSA is a virulent organism that causes significant morbidity and mortality. Vancomycin, the drug of choice for the treatment of MRSA infection, is more toxic and expensive than the B-lactam drugs used to treat susceptible S. aureus infections. Therefore, considerable emphasis has been placed on controlling MRSA spread in hospitals ***(Boyce, 1992).***

The development of a MRSA infection necessitates the acquisition of the strain, establishment of colonization, and then progression from colonization to symptomatic infection ***(Hershow et al., 1992).***

Many risk factors for MRSA acquisition have been identified, such as previous hospitalization, admission to an ICU or a burn unit, length of hospital stay before MRSA acquisition, proximity to a MRSA-colonized patient, age, coma, invasive procedures, skin lesions and previous antimicrobial treatment ***(Asensio et al., 1996).***

Once MRSA is introduced into a hospital, it is difficult to eradicate. One reason for this difficulty is the role of colonized individuals as reservoirs. Attempts to eradicate MRSA colonization using systemic antimicrobials is expensive with well-described failures and relapses. Moreover, resistance to drugs used to eradicate colonization had been described ***(Boyce, 1989)***.

AIM OF THE WORK