PREVALENCE OF STAPHYLOCOCCUS EPIDERMIDIS INFECTIONS IN IMMUNOCOMPROMISED PATIENTS

Thesis

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بسم الله الرحمن الرحيم

(... قال رب اشرح لى صدرى

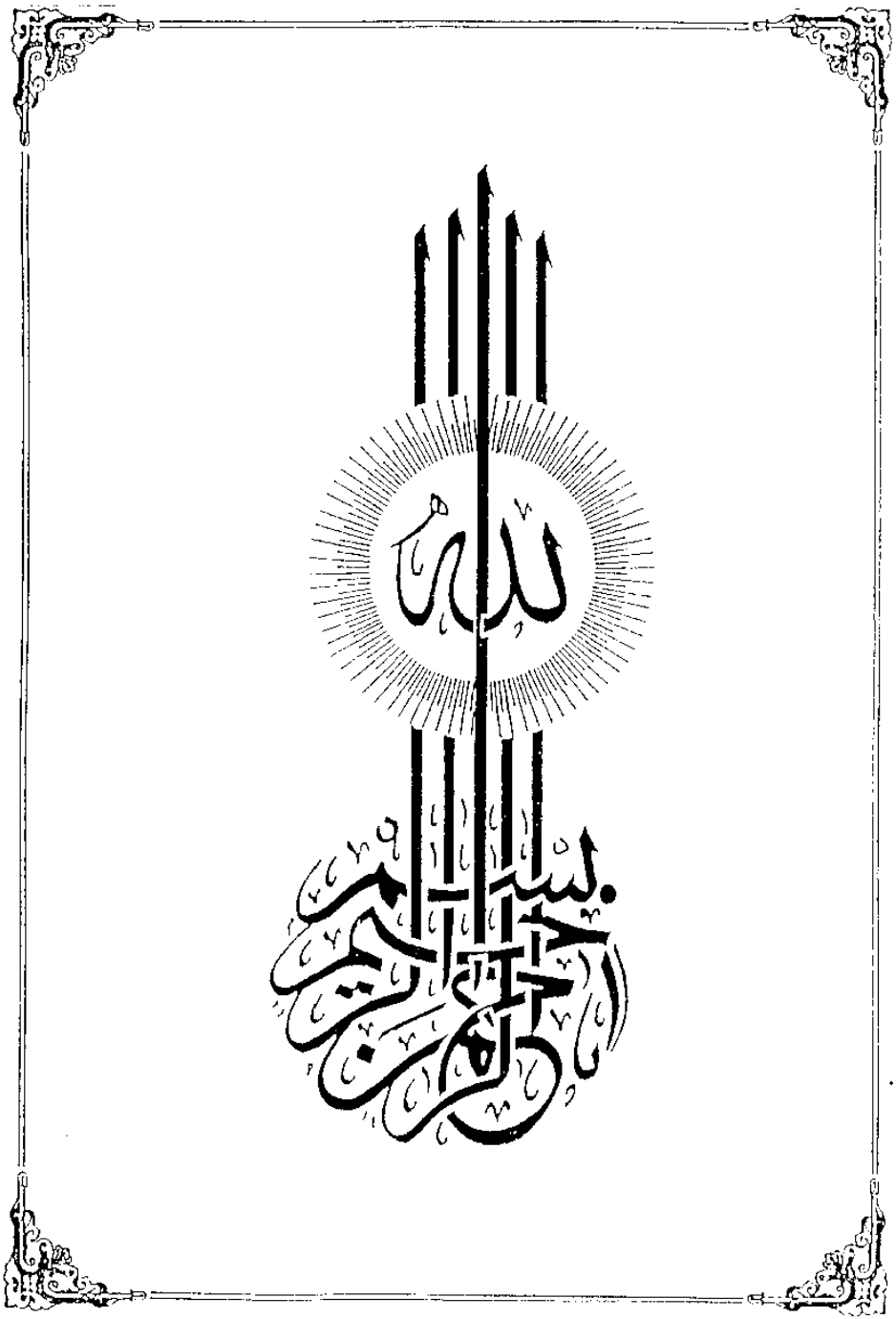
ويسر لى امرى واحلل

عقدة من لسانى يفقهوا

قولى...)

صدق الله العظيم

سورة طه آيه ٢٥-٢٧



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ABBREVIATIONS

C-NS	Coagulase negative staphylococci
CSF	Cerebro-spinal fluid
HPF	High power field
I..V	Intravenous
O.D.	Optic density
PVE	Prosthetic valve endocarditis
S.	Staphylococcus
SBE	Subacute bacterial endocarditis
SEB	Staph epidermidis bacteremia
TSB	Tryptic soy broth

Introduction

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Immunocompromised hosts refer to those patients who have underlying condition and/or on therapy that increases their susceptibility to infection. Organisms with little virulence for the normal human host become life threatening pathogens in those hosts *(Rotstein et al., 1985)*.

Alterations in the defence mechanisms whether congenital or acquired are characterized by unusual susceptibility to infection. This alterations occur in the course of many illnesses such as chronic deblitating diseases, neoplastic diseases or patients under cytotoxic drugs, chemotherapy or irradiation *(Ronold and Riben, 1981)*.

Aplastic anaemia, immunosuppressive therapy, excessive use of broad-spectrum antibiotics, high dose corticosteroids and indwelling catheters (as used for parentral nutrition and prosthetic devices) were among other factors which compromised the host defences *(Troungos et al., 1983)*.

The coagulase negative staphylococci (C-NS) have clearly emerged as pathogens opportunistic in nature. Alteration of the normal integrity of the skin by manipulations allows these normally commensal bacteria widely distributed on human skin to enter the body and initiate clinically relevant infections. It is now generally believed that the virulence of (C-NS) is related to their ability to attach to and subsequently colonize the surface of implanted medical devices *(Deighton and Balkau, 1990)*, 20% to 65% of all infections of prosthetic devices, catheters and shunts are caused by coagulase negative staphylococci *(Patrick et al., 1990)*.

S.epidermidis is now recognized as an opportunistic pathogen which may colonize various indwelling medical devices, such as prosthetic heart valves *(Archer et al., 1982)*. Cerebro-spinal fluid shunts *(Schoenbaum et al., 1975)*. Orthopaedic prostheses or appliances *(Wilson, 1977)* and intravascular catheters *(Peters et al., 1982)*. This species may be also responsible for postoperative infections in patients undergowing cardiac surgery *(Archer and Jenenbaum, 1980)*, subacute bacterial endocarditis *(Gemmell and Dawson, 1982)*,

infection in patients receiving continuous peritoneal dialysis *(Akatov et al., 1989),* endophthalmitis, *(Valenton et al., 1973)* otitis media, *(Feigin et al., 1973)* and a variety of wound infections. *(Nord et al., 1976).* Recorded that compromised patients undergoing immunosuppressive therapy are particularly susceptible to infection by this species.

Aim of The Work

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The aim of this work is to study the incidence of infections with staph epidermidis in different groups of immuno-compromised patients isolated from clinical specimens in an attempt to clarify their role in bacterial infection.

Review of Literature