# BACTERIOLOGICAL SURVEY IN THE NEONATAL INTENSIVE CARE UNIT

## THESIS

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**M.Sc. Degree in Paediatrics**

By

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بسم الله الرحمن الرحيم

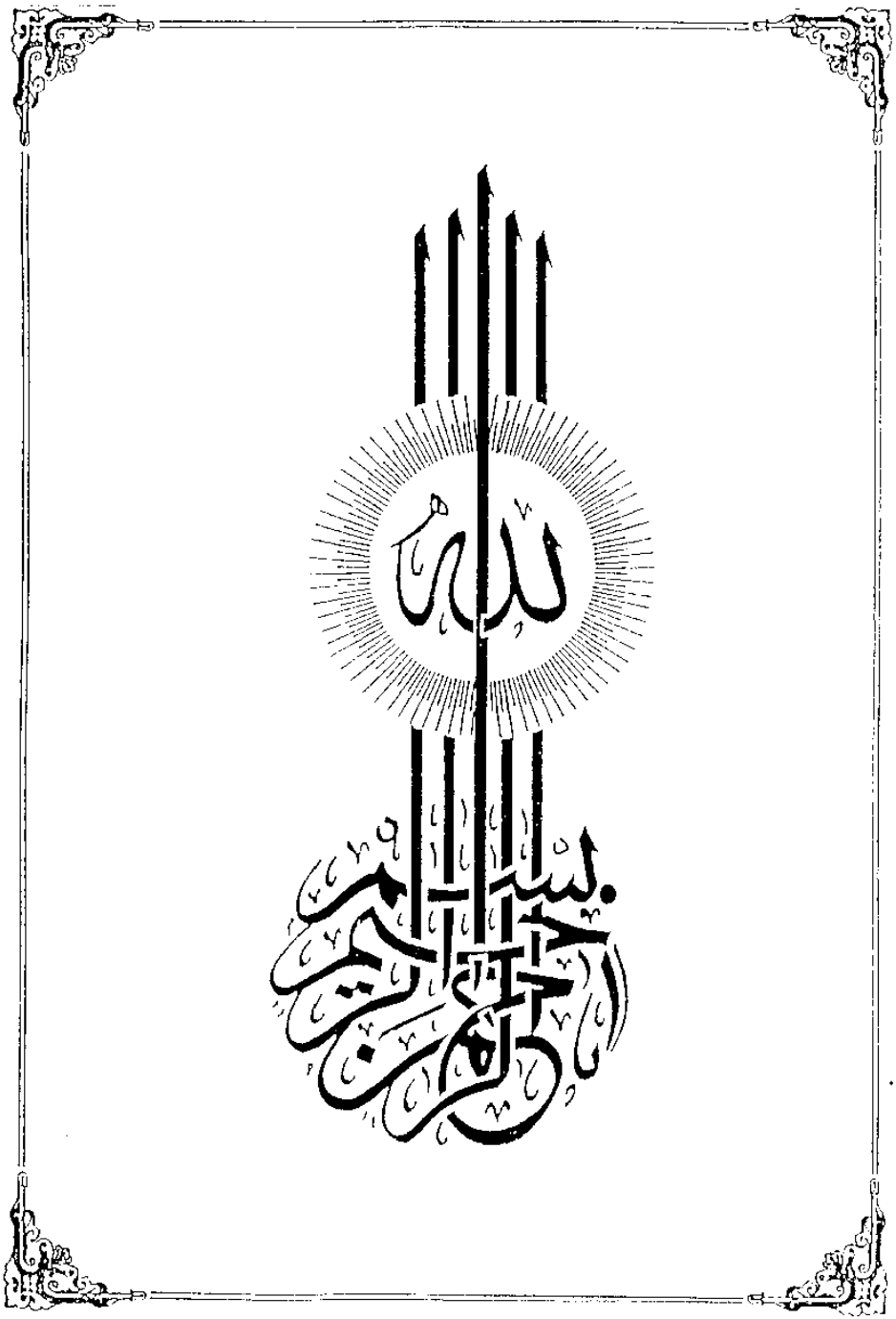
« اقرأ باسم ربك الذي خلق ، خلق الإنسان من

علق ، اقرأ وربك الأكرم ، الذي علم بالقلم ،

علم الإنسان ما لم يعلم »

صدق الله العظيم

سورة العلق ، الآيات ١-٥



*To. . . .*

*My family*

*My husband*

*My daughter*

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## ABBREVIATIONS

| | |
|---|---|
| AIDS | Autoimmune deficiency syndrome |
| Cl. tetani | Clostridium tetani |
| Coryne. diphtheria | Corynebacterium diphtheria |
| CS | Caesarian section |
| E. coli | Escherichia coli |
| F | Female |
| HIE | Hypoxic ischaemic encephalopathy |
| Hrs | Hours |
| ICU | Intensive care unit |
| IDM | Infant of diabetic mother |
| Ig | Immunoglobulins |
| M | Male |
| Myco. tuberculosis | Mycobacterium tuberculosis |
| NICU | Neonatal intensive care unit |
| NVD | Normal vaginal delivery |
| Obst. ward | Obstetric ward |
| OU | Obstetric unit |
| PET | Preeclampsic toxaemia |

| | |
|---|---|
| PMN | Polymorphonuclear leucocytes |
| PROM | Prolonged rupture of membrane |
| Ps. aeruginosa | Pseudomonas aeruginosa |
| RD | Respiratory distress |
| RDS | Respiratory distress syndrome |
| Resp. viruses | Respiratory viruses |
| S. aureus | Staphylococcus aureus |
| Staph. epidermidis | Staphylococcal epidermidis |
| Staph. | Staphylococcus |
| WBC | White blood cells |

# *Introduction*

# INTRODUCTION

The foetus and newborn are especially susceptible to generalized, sometimes overwhelming bacterial-viral and parasitic infections.

The newborn infants is susceptible because of immature cellular and humoral immune systems. Since newborns are so susceptible to infection, traffic in the nursery must be monitored and controlled.

Physicians, nurses, laboratory technicians, parents, students and anyone else authorized to enter the nursery and handle infant must wash their hands for three minutes with a germicidal soap and wear a clean gown. This procedure should be repeated before handling each infant (*Kempe et al.*, 1987).

Many patients within a paediatric intensive care unit are infected, mostly with community acquired infections. The outcome is generally better than that anticipated in neonatal intensive care units. However, infection continues to be associated with increased mortality when compared with those patients who remain uninfected (*Brown et al.*, 1987).

The diagnosis of sepsis in the neonate is a difficult task for those involved in neonatal care sepsis centres in the differential diagnosis of almost any sign of neonatal distress (e.g. apnea, bradycardia, respiratory problems, feeding intolerance, or temperature instability (*Kurlat et al.*, 1989).

The risk of nosocomial infection in fullterm neonates cared for in well-baby nurseries can be minimized if the personnel adhere to fundamental infection control principles (*Goldmann,* 1989).

Neonates who require intensive care face a much greater risk of infection, particularly if they have very low birth weights. Such babies have seriously impaired host defenses, require prolonged hospital stays, and are exposed to a variety of intensive diagnostic and therapeutic procedures. They are extremely vulnerable to a wide range of nosocomial pathogens, including bacteria, fungi and viruses, many of which are frank opportunists. Although, it may not be possible to prevent all, or even most of these infections, careful attention to barrier precautions, adequate staffing, sound NICU design, and prompt care identification and controlling can substantially reduce the risk (*Goldmann,* 1989).