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THE PROTECTIVE EFFECT OF EACH OF THE RECOMMENDED DOSES OF ORAL POLIOVACCINE IN PRESCHOOL CHILDREN IN BAGHDAD, IRAQ

THESIS

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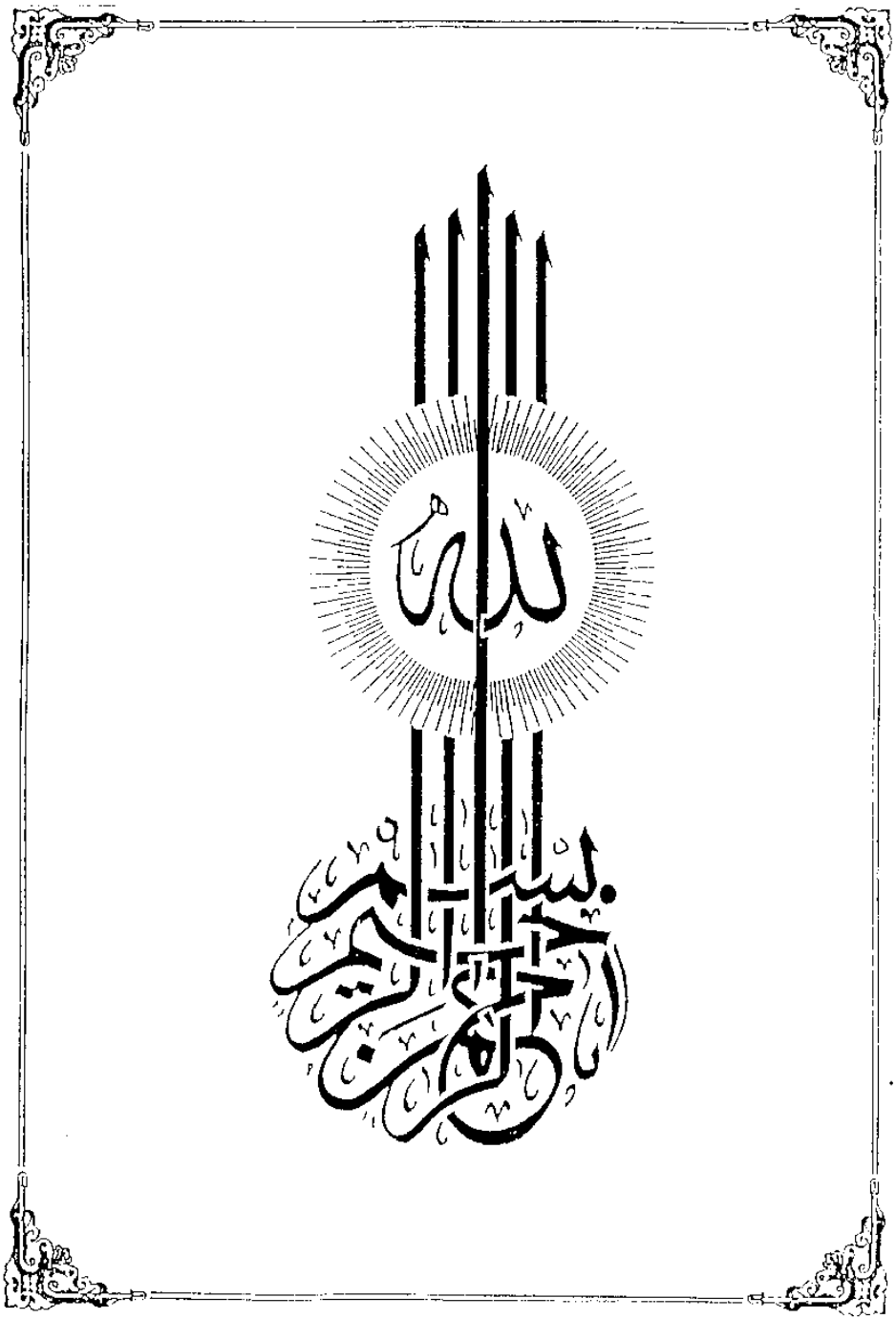

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Introduction

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INTRODUCTION

The introduction of oral poliovaccine in Iraq in 1967 has dramatically affected the epidemilogy of poliomyelitis. The spread of the disease has been limited by partial immunization. This, together with suboptimal immunization results in the buildup of a substantial immunity deficits in the population. Thus the introduction of virulent wild-type virus into these populations causes extensive epidemics of paralytic poliomyelitis as occured in 1976. Partial immunization may thus result in a particularly precarious sitiuation and it therefore becomes mandatory that regular immunity surveillance be carried out to prevent the build-up of a substantial immunity deficits and to protect against the consequent major epidemics. A comprehensive serosurvey is recommended to determine vaccine coverage and vaccine quality as well as the determination of antibody status by serology to define pockets of susceptibles all over the country.

There is little doubt that a monitoring programme such as this is costly, involving a large number of health professionals. Energetic motivation and a high degree of dedication of purpose are required to ensure

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a satisfactory collection of specimens. The immediate and direct cost of a monitoring programme is too little if compared by the cost of long-term hospitalizations, appliances, rehabilitation, and days of healthy life lost... etc. It is clear that an epidemic of poliomyelitis cost many orders higher than a monitoring programme.

It has become apparent in recent years that prophylactic vaccination against poliomyelitis has not achieved complete eradication of the disease. In spite of the marked reduction in reported cases since the legistation of the compulsory vaccination for infants in Iraq 1980, the disease remain a major cause of permanent disabilty.

Despite the 63% coverage rate by three doses of OPV in below two years of age Iraqi children (1985), there appeared to be continuing circulation of wild poliovirus. There is continuing incidence of paralytic poliomyelitis, including cases among children who had received complete courses of the primary three doses of OPV.

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Since 1967, when Sabin vaccine was first introduced into Iraq, there has not been any documented data on the protective effect of each dose of OPV.

The following important questions have been raised concerning the WHO recommendations for the use of oral poliovirus vaccine (OPV)

a) How effective is OPV when administered before the age of three months?

b) What is the protective effect of each of the three recommended doses?

c) How effective is OPV when intervals between doses are less than 6-8 weeks?

d) What are the benefits of booster doses for children who have received three doses of OPV during the first year of life?

This project is proposed to answer question (b): among preschool children in Baghdad, Iraq.

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OBJECTIVES

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OBJECTIVES OF THE STUDY

Immediated Objectives:

The assessment of the protective effect of each dose of the three recommended doses in preschool children in Baghdad.

The Ultimate Objectives:

To provide a base line data on the effectiveness of poliovaccine in Baghdad that help to:

1) Reduce morbidity and mortality from poliomyelitis by providing effective immunization programme.

2) To set up a system of disease surveillance, to study epidemiological aspects of poliomyelitis and to take appropriate measures to reduce disease transmission and incidence in the vulnerable age groups.

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Review of Literature

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