DERMATOGLYPHICS AND AMBIGUOUS GENITALIA IN EGYPT

Thesis

Submitted for partial fulfilment of Master degree in Pediatrics

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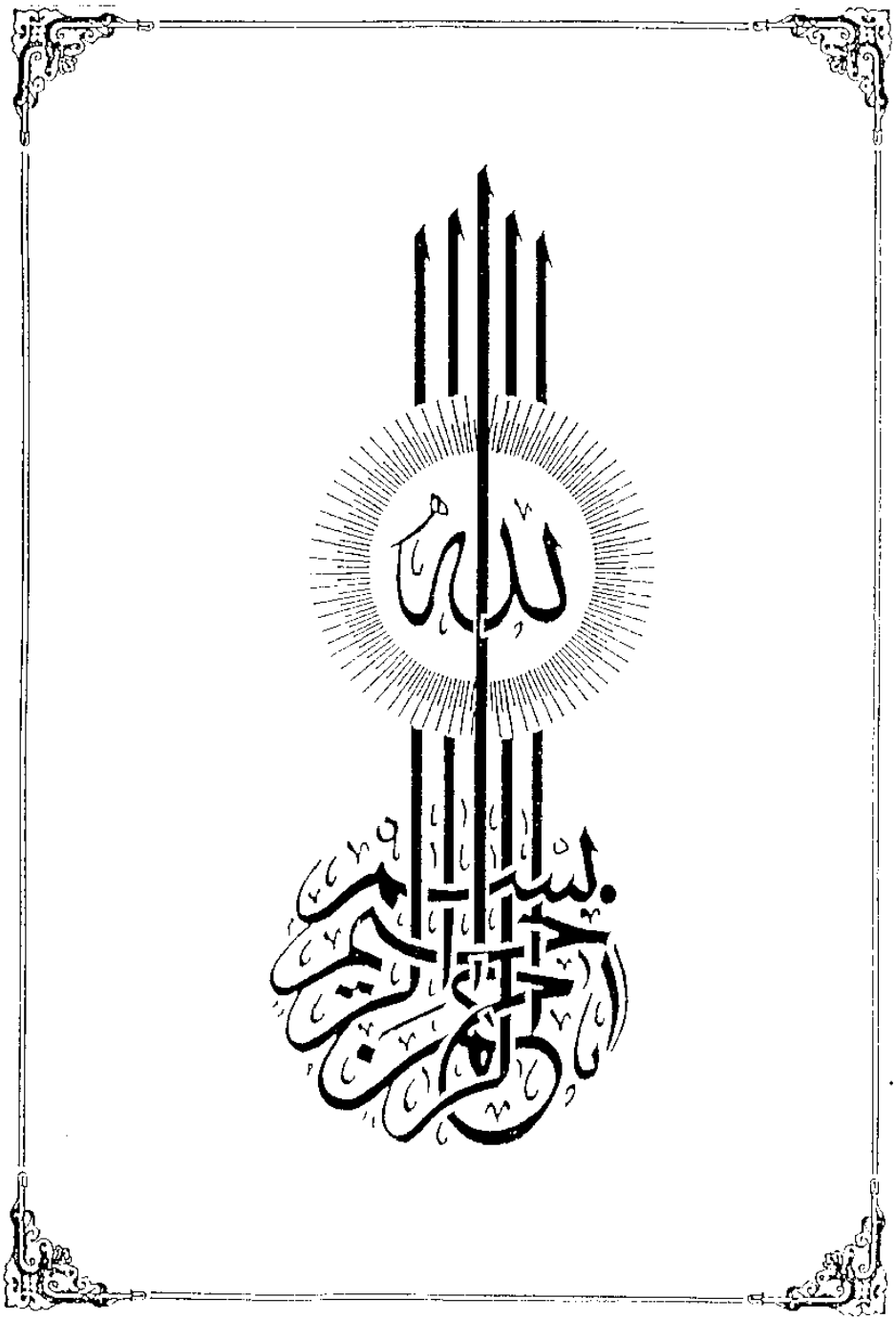
بسم الله الرحمن الرحيم

" هل آتى على الانسان حين من الدهر
لم يكن شيئا مذكورا {}
انا خلقنا الانسان من نطفة أمشاج
نبتليه فجعلناه سميعا بصيرا "

صدق الله العظيم

سورة الانسان آية ١ , ٢



To my mother ,
who suffered a lot during this work ,
with love .

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Introduction and Aim of the Work

Sex chromosomes have been found to influence a large number of developmental systems in humans (Barlow et al. 1973)

Throughout this work we are concerned with two aspects of human development that are known to be influenced by sex chromosomes .

The first is dermatoglyphics or dermal ridge pattern configurations which recently have gained much interest as a prenatal marker and a valuable diagnostic tool (Schaumann and Kimura 1991).

The second is the development of external genitalia whose abnormalities compose one of the much complicated problems in diagnosis and management (Pagon 1987).

Dermal ridge patterns begin to develop very early in prenatal life and are not completely developed until the 6th month of pregnancy. During this period, many different genetic and environmental intrauterine events may bring their effect on the final outcome of dermal ridge pattern differentiation that is, at birth will be permanent for life (Schaumann and Alter 1976).

Sex chromosomes effect on dermatoglyphics have been proved on both the qualitative and quantitative aspects of palmar ridges (Alter 1965 , Penrose 1968 Loesh and Huggins 1992)

Trying to illucidate the mechanism by which Sex chromosomes influence dermatoglyphyics, Polani and Polani (1979) found that certain dermatoglyphic traits are influenced by fetal androgens. Janz and Hunt (1986) suggested that sex chromosomes actually control the tissue sensitivity to sex steroids and that digital dermatoglyphic traits are then affected by hormones and not chromosomes.