ROCURONIUM

A COMPARATIVE STUDY WITH MIVACURIUM

Thesis
Submitted for Partial Fulfillment
of M.D. Degree in Anesthesia

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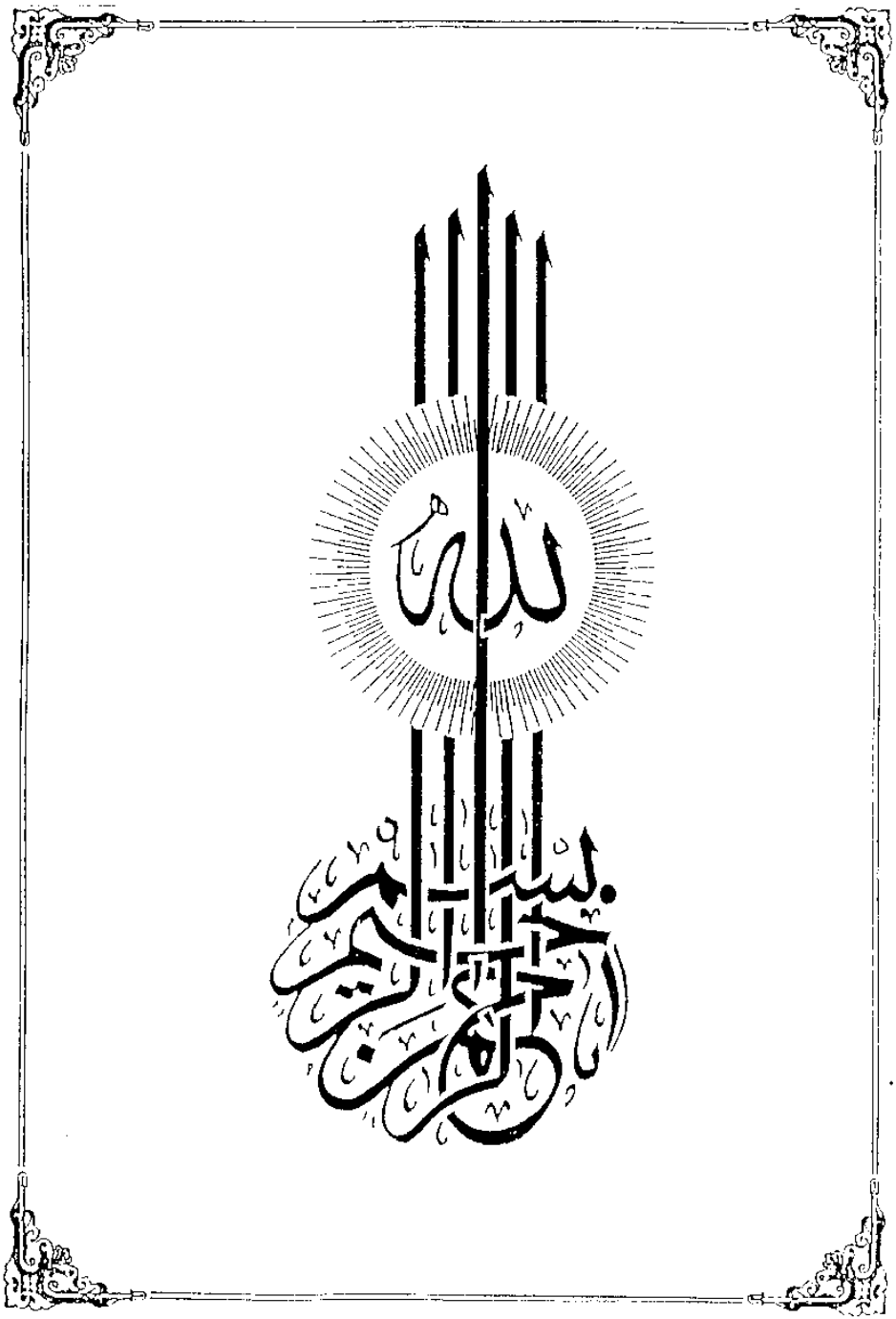
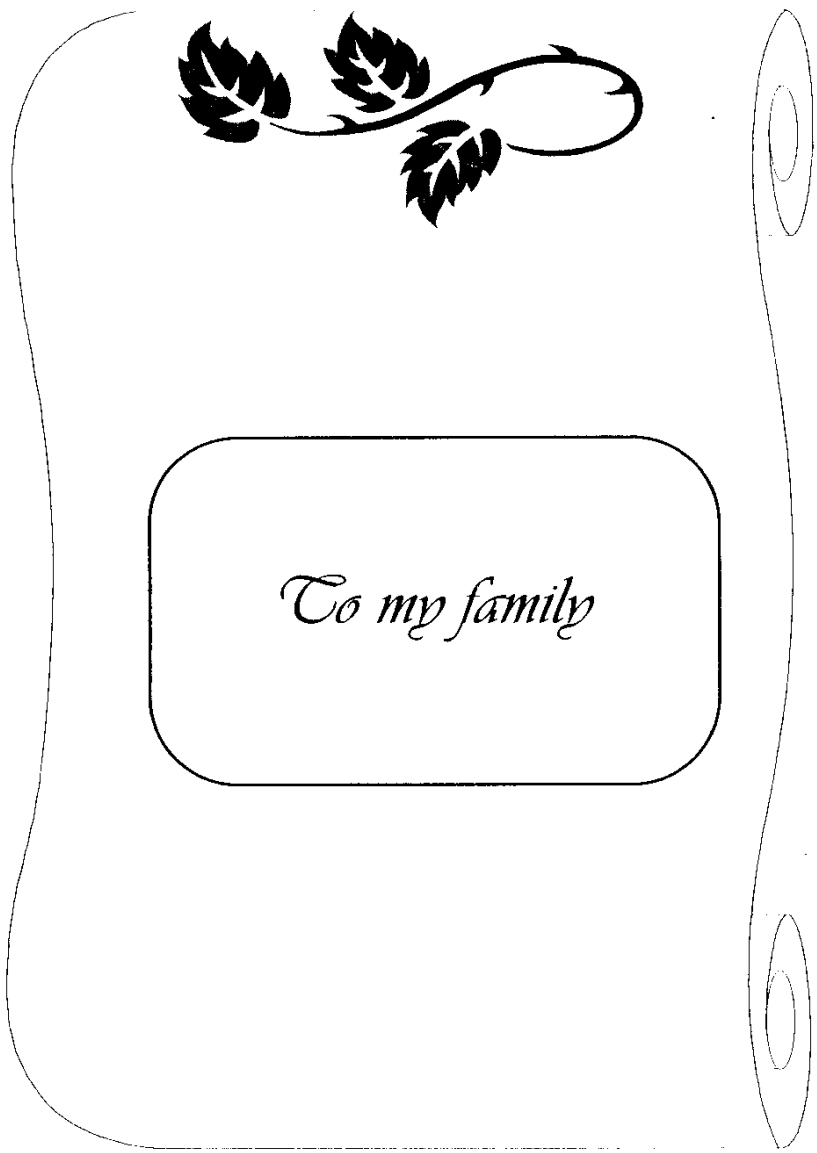


بسم الله الرحمن الرحيم

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

سورة البقرة – الآية ٣٢



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Khaled Ahmed Moustafa

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Introduction

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The introduction of each new muscle relaxant has advanced anesthetic practice by trying to meet some defects in the existing muscle relaxants.

In spite of intensive research, it is not possible to find the ideal fast onset, short acting non-depolarizing muscle relaxant to replace suxamethonium.

In order to use the currently available non-depolarizing muscle relaxants instead of suxamethonium, we may use the priming technique (but this method sometimes leads to hazardous effects to the patients) or we may increase the dose of the drug but this well be at the expense of prolonged duration of action.

Following the introduction, in the early 1980s, of the two muscle relaxants of intermediate duration - atracurium and vecuronium - there were many studies and various synthetic strategies, based on vecuronium's molecule, had been proposed and led to the introduction of a new non-depolarizing neuromuscular blocker, rocuronium, which appears to fill the gap for an agent with rapid onset while lacking the potentially adverse features of suxamethonium, retaining a medium duration of action, not subject to drug interaction, with minimal cardiovascular effects, do not depend significantly on renal excretion, and easy to reverse.