REVERSION OF RECENT ONSET ATRIAL FIBRILLATION TO SINUS RHYTHM BY INTRAVENOUS FLECANIDE

THESIS
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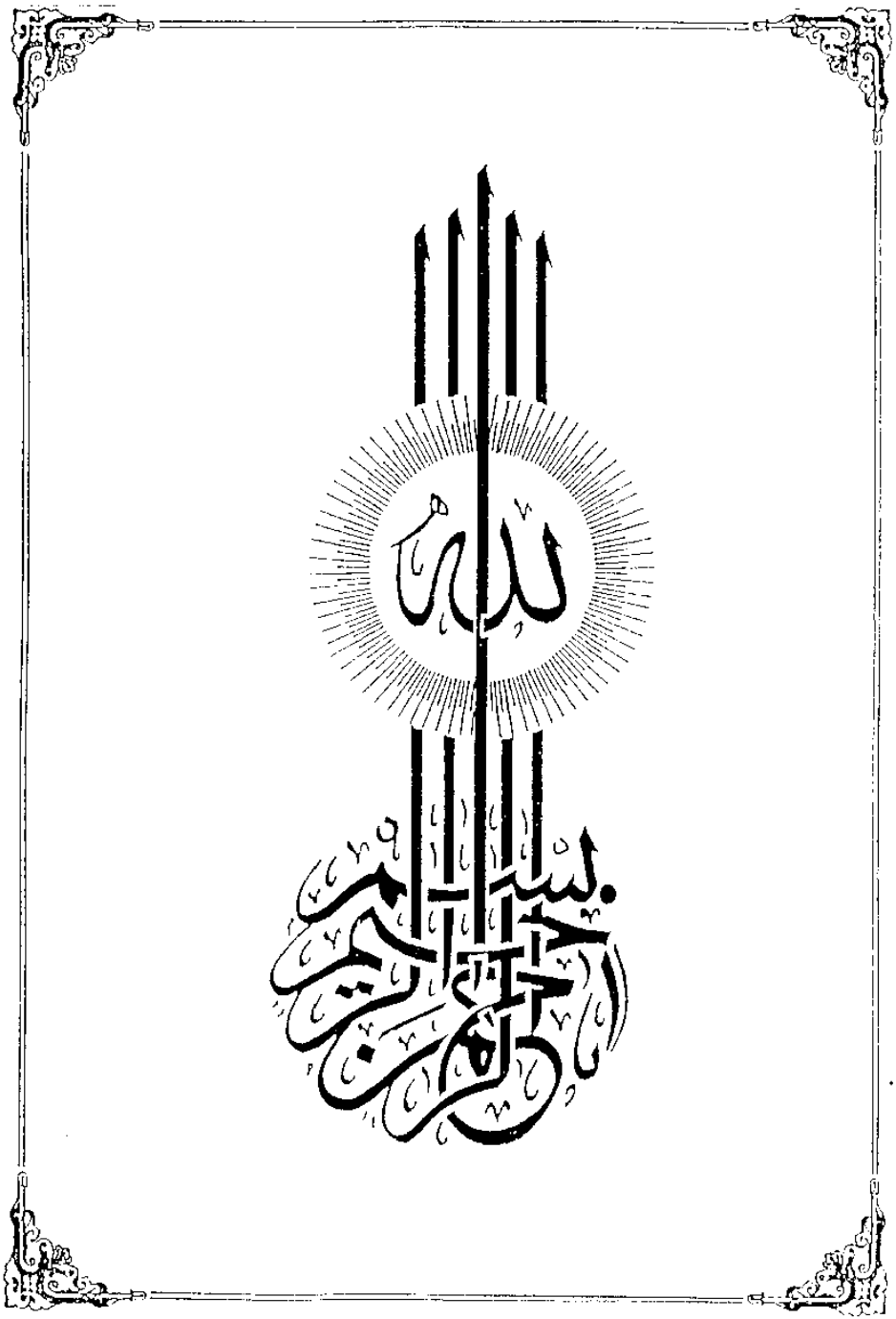
بسم الله الرحمن الرحيم

" سنريهم آياتنا فى الآفاق وفى أنفسهم حتى يتبين لهم أنه الحق أو لم يكف بربك أنه على كل شئ شهيد ".

صدق الله العظيم

سورة فصلت/ آية ٥٣



TO...

THE SOUL OF MY FATHER,
TO MY MOTHER
AND MY WIFE

ACKNOWLEDGMENT

First of all, thanks to GOD.

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INTRODUCTION

INTRODUCTION

Atrial fibrillation (AF) is a common arrhythmia found in 1% of elderly people over 60 years. The overall incidence of AF developing over two decades in people over 30 years old, according to Framing-ham data is 2%. The incidence increases with age and most affected people have underlying cardiac disease.

In addition to the hemodynamic alterations, the risk of systemic emboli is an important consideration in AF.

Non valvular AF is the most common cardiac disease associated with cerebral embolism.

Cardiogenic emboli in the United States occurs in (45%) in patients with non-valvular AF, the rest occur in patients with acute myocardial infarction (15%), chronic left ventricular dysfunction (10%), Rheumatic heart disease (10%) and others. The risk of stroke in patients with AF is 5-7 times greater than controls without AF.

Treatment of AF is directed toward slowing the ventricular response, and if possible restoring and maintaining sinus rhythm.

Flecainide, a class 1C antiarrhythmic agent that shortens the atrial refractory period while prolonging conduction in all cardiac tissues. There have been a number of uncontrolled studies reporting successful reversion to sinus rhythm with flecainide in patients with recent-onset AF.

Flecainide is particularily effective than quinidine, and disopyramide and provides better antiarrhythmic effect.

AIM OF THE WORK

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The aim of this study is to assess the effectiveness and safety of intravenous flecainide in reverting recent-onset atrial fibrillation to sinus rhythm.

REVIEW OF LITERATURE

CHAPTER (1)

ATRIAL FIBRILLATION

Contents:

- Definition.
- Mechanism.
- Aetiology.
- Pathology.
- Diagnosis and clinical assessment.

Atrial fibrillation in course of cardiac diseases:

- Atrial enlargement in atrial fibrillation.
- Cardiomyopathy.
- Coronary artery disease.
- Supraventricular tachycardia.
- Heart failure.
- Systemic embolization.

DEFINITION

Atrial fibrillation (AF) is the grand father of cardiac arrhythmias. Known in the 19th century as "arrhythmia perpetua", it was clearly defined clinically by Mac.Kenzie and electrocardiographically by Lewis at the begining of this century[1]. .

In AF, the normal regular co-ordinated sequential activation process of the atria is lost. the atria are physiologically "fragmented" into a mosaic of tissue islets in various stage of excitation, refractoriness, or responsiveness. These tissue islets form minute wave or activation fronts which can excite their neighbouring tissue areas depending upon their state of excitability, and this tends to perpetuate the choatic or fibrillatory process.

MECHANISM OF ATRIAL FIBRILLATION:

Clinical classification of supra-ventricular tachyarrhythmias in tachycardia, flutter, and fibrillation is primarily arbitrary[2]. The most important criterion used for this classification is the rate of the arrhythmia. As indicated by some authors, there is overlap in rate between tachycardia and flutter and an area of "no man's land" between flutter and fibrillation.

During AF atrial activity is chaotic and unco-ordinated. On the electrocardiogram the completely irregular atrial activation is recorded in the form of small waves that constantly vary in amplitude and configuration. Atrial response was estimated to vary between 400 and 650 beats/min. The ventricular rhythim during AF is completely irregular. AF may occur in a paroxysmal form or it may become chronic. Generally paroxysm of AF must be considered a precursor of permenant AF. Two groups of different mechanisms may be responsible for producing tachyarrhythmias. Group I based on abnormal impulse formation, Group II is based an a disorder of impulse conduction, leading to circulating excitation or re-entery.

The most likely mechanism underlaying fibrillation of the atria is the presence of multiple circus movements of the