# Role of Transesophageal Echocardiography In The Management of Non-Valvular Atrial Fibrillation

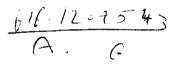
#### Thesis

Submitted for Partial Fulfillment of Master Degree In Cardiology



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1994





## \*\*\*

70 My Family

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## List of Abbreviations

AC Anticoagulation

**AF** Atrial fibrillation

Ao. Scl. Aortic sclerosis

AV Atrioventricular

CFI Color flow imaging

COAD Chronic obstructive airway disease

CV Cardioversion

CW Continuous wave

CXR Chest X-ray

DC Direct current

ECG Electrocardiogram

EF Ejection fraction

F Female

IHD Ischemic heart disease

INR International ratio

IVS Interventricular septum

J Joules

LA Left atrium

LAA Left atrial appendage

LV Left ventricle

LVDID (EDD) Left ventricular end diastolic internal diameter

LVSID (ESD) Left ventricular end systolic internal diameter

M Male

MR Mitral regurgitation

NRAF Non-rheumatic atrial fibrillation

Association Classification

PT Prothrombin time

PTT Partial prothrombin time

PW Pulsed wave

SEC Spontaneous echo contrast

[0 = No; I = Mild; II = Severe]

TEE Transesophageal echocardiography

TR Tricuspid regurgitation.

TTE Transthoracic echocardiography

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Introduction

Control

## Introduction & Aim of The Work

Atrial fibrillation is one of the most common types of arrhythmias, occurring in up to 4% of patients over 60 years of age (*Kannel et al.*, 1992).

Atrial fibrillation has been identified as the rhythm responsible for more than half of all instance of systemic thromboembolism from the heart (*Abbott et al.*, 1982).

In addition, atrial fibrillation is associated with a decrease in cardiac output because of the loss of atrial contribution to ventricular filling (Morris et al., 1965).

Cardioversion is performed in patients with atrial fibrillation in an effort to improve cardiac function, relieve symptoms and decrease the risk of thrombus formation (*Pritechett et al.*, 1992).

Unfortunately, successful cardioversion is associated with a 5-7% incidence of embolism among those patients who have not received anticoagulant therapy (*Resnkov et al.*, 1967).

Anticoagulation decreases the risk of embolic event after cardioversion to less than 1.6% (*Weinberg et al., 1989*) but it carries its own risk and the patient must be rehospitalized for cardioversion after 3-4 weeks.

Transesophageal echocardiography is a highly accurate method for detecting atrial thrombi (*Manning et al., 1992*).

The aim of this study is to assess the safety of cardioversion from atrial fibrillation without prolonged anticoagulation using transesophageal echocardiography to exclude atrial thrombi.



# Atrial Fibrillation

#### Prevalence, Aetiology & Risk of Embolization

#### Prevalence:

The overall prevalence of atrial fibrillation in the Framingham cohort study is 2.15% in men and 1.71% in women.

The incidence rises with age from approximately 0.2% for those age 25-35 years to approximately 3% for those 55 - 64 years old (*Kannel et al.* 1982).

#### Aetiology:

The vast majority of patients with atrial fibrillation have organic heart disease.

In a clinical series of 230 patients with atrial fibrillation, *Hurst et al.* (1964) found that 92% had evidence of heart disease.

Hinton et al. (1977) in a postmortem series of patients with atrial fibrillation found that 95% had underlying heart disease.

Idiopathic atrial fibrillation or "lone" AF, accounts for fewer than 10% of cases of AF.