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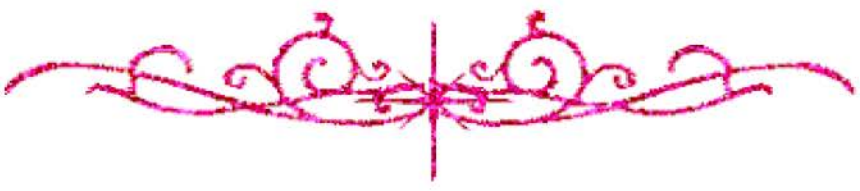

بالرسالة صفحات لم ترد بالأصل

TRANSESOPHAGEAL DOPPLER ANALYSIS OF CORONARY SINUS FLOW IN TRICUSPID REGURGITATION

Thesis

Submitted for Partial Fulfillment of Master Degree

In

"Cardiovascular Diseases"

By

SAMAH ESMAEL ABD EL-AZIZ ABU-HAMAR
M.B. B.Ch.

SUPERVISORS

Prof. Dr.

MOHAMED ABD EL-AZIZ TAYEL
Prof. of Cardiology
Faculty of Medicine
Tanta University

Dr.

FATHEA AHMED EL-SHESHTAWY
Assistant Prof. of Cardiology
Faculty of Medicine
Tanta University

Dr.

HANAN KAMEL KASSIM
Lecturer of Cardiology
Faculty of Medicine
Tanta University

FACULTY OF MEDICINE
TANTA UNIVERSITY
2000

قَالُواْ سُبْحانَكَ لاَ عِلم لَنَاَ إلاَ ماَ علَمتنا إنّكَ أنَــتَ العَليمُ الحكيم

صدق الله العظيم

سورة البقرة (٣٢)

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CONTENT

INTRODUCTION

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Color Doppler echocardiography is currently considered the diagnostic method of choice in the assessment of tricuspid regurgitation[1]. The study of tricuspid regurgitation by transthoracic echocardiography is based on the quantification of the absolute regurgitate jet area, or the ratio between the regurgitate jet area and the area of the right atrium[2]. However, it is well known that these echocardiographic parameters have some limitations[3]. Accordingly, other ancillary indirect signs, such as systolic reversal of flow, in both the vena cava and the hepatic veins have been used to help in the assessment of tricuspid regurgitation severity[4]. Transesophageal echocardiography provides a new tool to readily visualize the tricuspid valve and its relations with the surrounding cardiac structures (such as the coronary sinus) with a definition not previously available with other techniques. Anatomic and echocardiographic studies have shown that in cases of severe tricuspid regurgitation the high pressure transmitted to the right atrium also affects the different venous sources that drain into this chamber[4]. Previous studies have demonstrated that transesophageal echocardiography can be used to assess the normal Doppler flow pattern of the coronary sinus[5]. However, the influence of tricuspid regurgitation in the coronary sinus flow has not been previously analyzed.

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The aim of this study was to:

Analyze the effects of tricuspid regurgitation in the Doppler flow pattern of coronary sinus using transesophageal echocardiography.

Determine the value of the coronary sinus flow analysis in the assessment of the severity of tricuspid regurgitation.

REVIEW OF LITERATURE

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TRICUSPID VALVE REGURGITATION

1. ANATOMY OF THE TRICUSPID VALVE:

The tricuspid valve apparatus consists of six components: the right atrium, the annulus fibrosus, the valvular tissue, the chordae tendinae, the papillary muscles and the ventricular wall.

Valvular tissue and annulus fibrosus[6]:-

When tricuspid valve is viewed from its atrial aspect, the normal tricuspid orifice is roughly oval. The main axis is transverse and its sharpest extremity corresponds to the anteroseptal commissur. Despite of the wide variations affecting the valve morphology (i.e. the depth and the configuration of the commissures), the orifice usually has three leaflets (anterior, posterior, and septal) separated by three commissures (anteroseptal, pasteroseptal and anteroposterior).

The anterior leaflet is the largest of the three leaflets. It is quadrangular and sometimes has a notch which may be as deep as a commissure. This cleft must be considered as a normal anatomic variation. The majority of the chordae tendinae anchoring the anterior leaflet arise from the anterior papillary muscle.

The posterior leaflet is smaller than the anterior, and roughly triangular than the anterior. It is often divided into two or three portions. The majority of the chordae anchoring the posterior leaflet arise from the muscle.