AIN SHAMS UNIVERSITY
INSTITUTE OF POST GRADUATE
CHILDHOOD STUDIES

PSYCHOLOGICAL DISTURBANCES IN PREADOLESCENTS AND ADOLESCENTS WITH MITRAL VALVE PROLAPSE

By

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Supervised By

Prof.Dr. **Sawsan Amin El-Sokkary**
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Faculty of Medicine - Ain Shams University

Dr. **Mohamed Ghanem**
Assistant Professor of Neuropsychiatry
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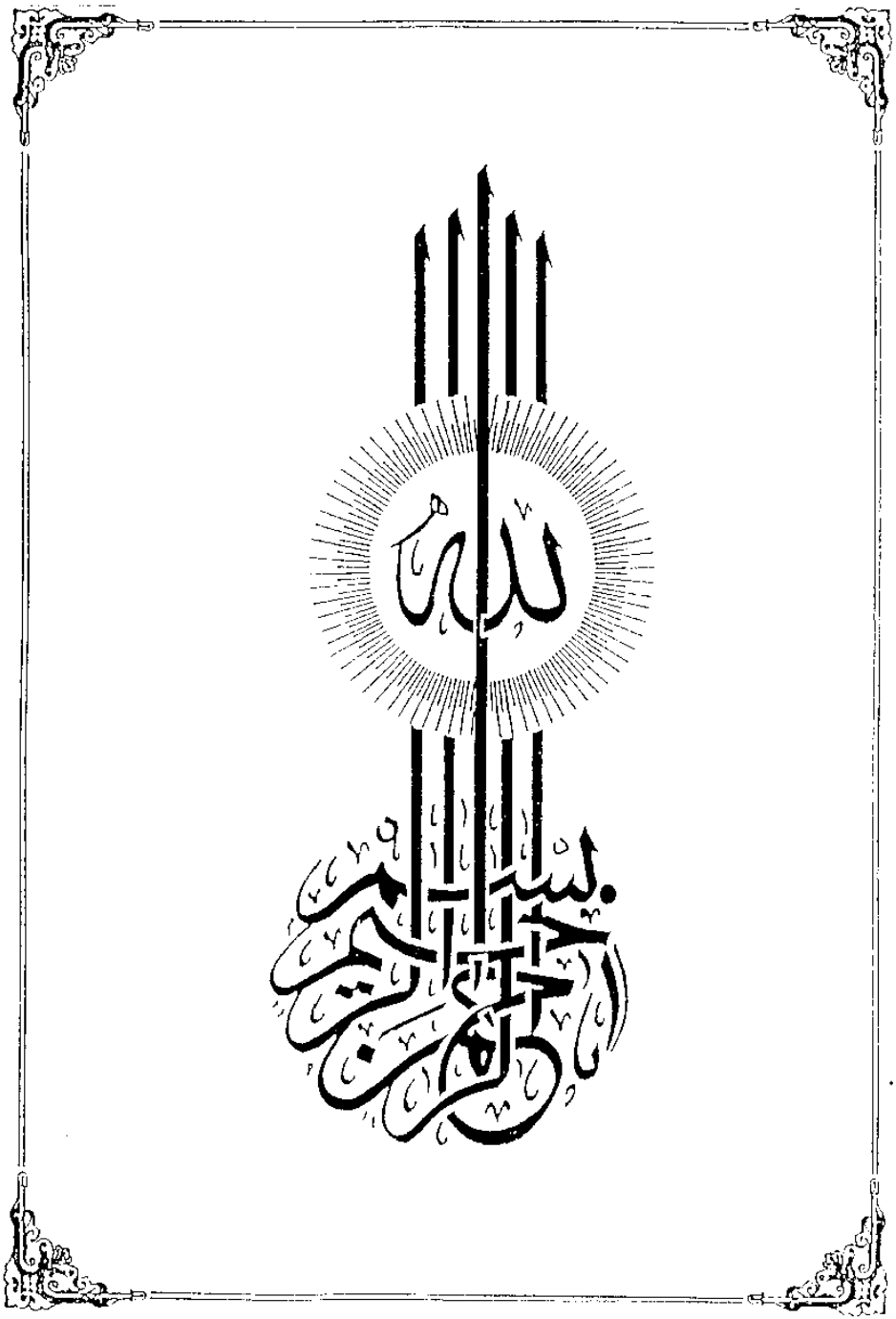

DISCUSSION AND JUDJMENT COMMITTEE

The vice-president for higher studies and research of Ain-Shams University has approved to form the following committee for the discussion of Mr.....

1. ..Prof. Dr. Sawsan El Sokkary - Sawsan El Sokkary
Prof of Pediatrics in Ain Shams.. Chairman... University Hospital.

2. Prof. Dr. Zeinab Bishry ..... Prof. of Psychiatry in
Ain Shams University Hospital Member..... Z. Bishry

3. Prof. Dr. Zenab El-Ramly ..... Prof. of Pediatrics
in Al Azhar University Hospital Member..... Zeinab El Ramly

4. Prof. Dr. Mohamed Ghanem ..... Assistant Prof. of Psychiatry
in Ain Shams University Hospital Member.... Mohamed Ghanem

Dedicated

To those who cared and still care
To those who gave with love and still do
To my Mother and to the memory of my Father

To the one who carried the burden with no
Complaint and shared the hardships with
More encouragement To My Husband

To the joy of my life and the stardust blown from
The Lord's hands to the humble me
To Ahmed, Aya, Alaa

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INTRODUCTION AND AIM OF THE WORK

Mitral valve prolapse is defined as the abnormal motion of one or both leaflets of the mitral valve into the left atrium during left ventricular systole.

Early observations in children and adolescents, an increasing awareness of the clinical features of this condition, and widespread availability of echocardiography have suggested a frequency in the pediatric population similar to that reported for adults (6.3%) (Bisset et al., 1980).

Boudoulas et al. (1990) proposed a clinically useful classification of patients with mitral valve prolapse. Mitral valve prolapse-anatomic which includes patients with a wide spectrum of floppy or myxomatous mitral valvular abnormalities from mild to severe due to expansion of the mitral valve leaflet area with elongated chordae and dilated mitral annuli.

The symptoms, physical findings and laboratory abnormalities in these patients are directly related to mitral valve dysfunction and complications associated with progressive mitral regurgitation. The term mitral valve prolapse syndrome refers to the occurrence of symptoms that result from various forms of neuroendocrine

or autonomic dysfunction in patients with mitral valve prolapse in whom the symptoms can not be explained on the basis of valvular abnormality alone (Boudoulas et al., 1990).

The diagnostic criteria for mitral valve prolapse include:-

- Clinical symptoms as: palpitation, chest pain, dyspnea, fatigue, light headedness, dizziness and syncope.
- Extra cardiac signs as: pectus or spinal deformity, high arched palate and hyper-extensibility of joints. Auscultatory findings such as: apical mid-to late systolic click and apical mid or late systolic murmur.
- Electrocardiogram shows ST-T wave abnormalities (flattening or inversion in the inferoapical leads).
- Echocardiogram (two-dimensional) reveals prolapse of one leaflet in two views, prolapse of two leaflets in one view, and prolapse of one leaflet unequivocally in one view (Liberthson et al., 1986).
- A connection between neuropsychiatric disorders, notably panic disorders, and the heart-specifically, mitral valve prolapse has been recognized for more than a century and well before the clinical description of mitral valve prolapse.

Anxiety, panic attacks and neurotic behavior are often considered to be components of mitral valve prolapse syndrome whether the two syndromes are identical, are

separate and distinct, or to a variable degree overlap still remains a matter of debate (Liberthson et al., 1986).

At present there is still widespread disagreement as to the degree of association between mitral valve prolapse and psychological symptoms.

AIM OF THE WORK:

The aim of this work is to study th prevalence of psychological disturbances in preadolescent and adolescent patients with mitral valve prolapse.

Also to evaluate the relationship between the severity of mitral valve prolapse and the presence of psychological disturbances in those patients.

Review of Literature

EMBRYOLOGY OF THE MITRAL COMPLEX

A) Formation of endocardial cushions

In the earliest stages of the development of the embryonic heart the cardiac tube is lined by endothelium which is widely separated from an outer myoepicardial cover by an acellular fluid, the cardiac jelly. By about 34 days, localized masses of mesenchymal cell have accumulated within the cardiac jelly and encircle the common atrioventricular canal. These masses protrude at two locations, superiorly and inferiorly, into the lumen of the embryonic heart as the superior and inferior endocardial cushions. When these endocardial cushions fuse in the midline, the freely communicating chambers are then divided into a left and a right atrioventricular canal (Fig 1). The superior and inferior endocardial cushions also contribute to the formation of atrioventricular valves, the lower atrial septum, and the membranous ventricular septum (*Van Mierop et al., 1962*).

By the seventh week, the superior and inferior endocardial cushions have fused together uniting with interventricular and interatrial septum (*Alley et al., 1962*).

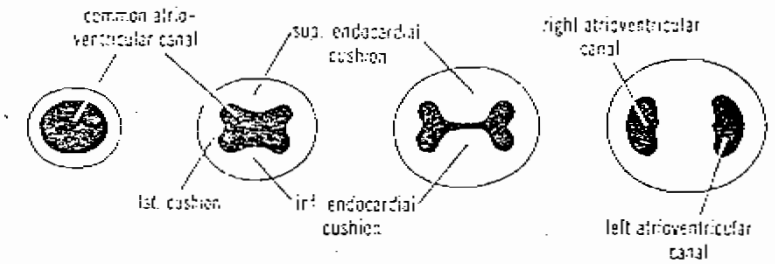

Fig (1): Formation of the septum in the atrioventicular canal. The initial circular opening becomes gradually widened in transverse direction (*Langman, 1980*).

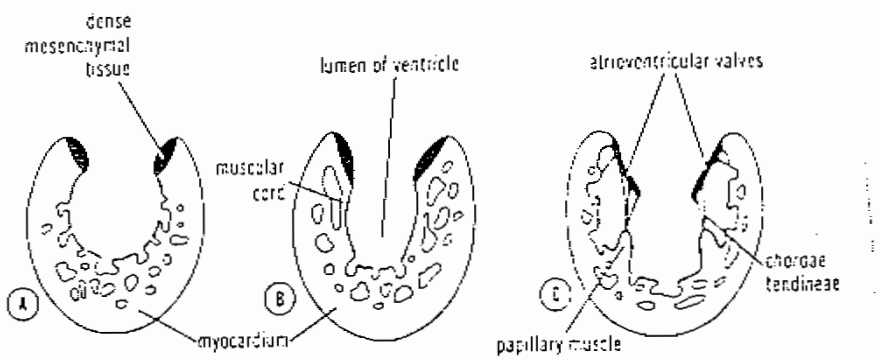

Fig (2): Formation of the atrioventicular valves and chordae tendineae. The valves are hollowed out from the ventricular side, but remain attached to the ventricular wall by the chordae tendineae (*Langman, 1980*).