شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

Ain Shams University Information Network
جامعة عين شمس
شبكة المعلومات الجامعية
@ ASUNET

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ منوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

© ASUNET

بعض الوثائق الاصلية تالفة

© ASUNET

بالرسالة صفحات لم ترد بالاصل

Physical and Psychological Study of Different Presentations of Rheumatic Fever and Pediatric Autoimmune Neuropsychiatric Disorders After Streptococcal Infection

Thesis

Submitted in partial fulfillment for the requirements
of the master degree in
Pediatrics
by

Amr Abdel-Ahad Donia
(M.B.B.CH)

supervisors

Prof. Dr.
Osama Abd Rab El-Rasoul Tolba
Professor of Pediatrics
Faculty of Medicine
Tanta University

Prof. Dr.
Ahmed Abd El –Rahman Moubarak
Prof. Of Neuro- Psychiatry
Faculty of Medicine
Tanta University

Dr.
Osama Abd El -Fatah El Agamy
Lecturer of Pediatrics
Faculty of Medicine
Tanta University

2000

بسم الله الرحمن الرحيم

﴿وفي انفسكم افلا تبصرون﴾

صدق الله العظيم

To my parents

Contents

Acknowledgment.....I

Abbreviation..... II

Introduction.....1

Aim of the work.....48

Subjects and methods.....49

Results.....56

Discussion.....71

Summary and conclusion.....86

References.....90

Arabic summary.....١

Acknowledgement

Before all and above all.. thanks to **ALLAH** for all things.

I wish to record my deep appreciation and profound gratitude to Prof. Dr. ***Osama Abd Rab El-Rasoul Tolba,*** professor and head of pediatric Cardiology and Rheumatology unit, Pediatric Department, Faculty Of Medicine, Tanta University for giving me the privilege to work under his supervision and for his fatherly guidance.

It is a pleasure to express my deepest gratitude to Prof. Dr. ***Ahmed Moubarak,*** Prof. of Neuropsychiatry, Faculty of Medicine, Tanta University for his continuous kind care and generous advice throughout the accomplishment of this study.

Whatever I say or write, all the words can not express my real feelings and deepest gratitude to Dr, ***Osama El-Agamy,*** Lecturer Of Pediatrics, Faculty of Medicine, Tanta University, who had been of so much help and give me a lot of his moral and scientific fountain and did not keep any effort to make this work complete and valuable.

Finally, a word of gratitude goes to every person helped me and to all the staff and members of pediatric department, Tanta university, faculty of medicine for their help and encouragement to finish this work.

Abbreviations

ADHD ....Attention Deficit Hyperactivity Disorder.

AH.....Anti-hyaluronidase.

AneuA.....Anti-neuronal antibodies.

ARF.....Acute rheumatic fever.

ASOT.....antistreptolysin O titre.

CRP.....C- reactive protein.

DSM IV..... .....Diagnostic and Statistical Manual of Mental Disorder. Forth edition.

GABHS.....Group A Beta Hemolytic Streptococci.

Kiddie-SADS-pl..... .....Schedule for Affective Disorder and Schizophrenia. Past and life time version.

LAP.....Long Acting Penicillin.

MR.....mitral regurge.

NIMH.....National Institute of Mental Health.

OCD.....Obsessive Compulsive Disorder.

OCS.....Obsessive Compulsive Symptoms.

PANDAS .....Pediatric Autoimmune Neuropsychiatric Disorder Associated with Streptococcal infection.

PET.....Positron Emission Tomography.

RF.....Rheumatic fever.

SC.....Sydenham's chorea.

TS.....Tourette Syndrome.

YBOCS.....Yale Brown Obsessive Compulsive Scale.

Introduction

RIIEUMATIC FEVER

Rheumatic fever (RF) is an inflammatory illness that occurs as a delayed sequel of group A streptococcal infection. It is frequently classified as a connective tissue disease because its anatomical hallmark is damage to collagen fibrils of connective tissue especially in the heart *(Stollerman, 1992).*

Although the name acute rheumatic fever emphasizes involvement of the joints, rheumatic fever owes its importance to the involvement of the heart, which can be fatal during the acute stage or lead to rheumatic heart disease, a chronic condition due to scarring and deformity of the heart valves. Rheumatic fever occurs as a delayed sequel to pharyngeal infection with group A Streptococci. It involves principally the heart, joints, central nervous system, skin, and subcutaneous tissues *(Stollerman, 1992).*

Rheumatic fever in Egypt:

Rheumatic fever still forms a major community health problem in Egypt *(Eissa et al., 1988).*

This is because severe cases with heart failure and multiple valvular lesions are frequent especially in the Delta region *(Eissa et al., 1985).*

The highest reported mortality rate in the world for rheumatic heart disease (27.5/100,000) and one of the highest for acute rheumatic fever (1.0/100,000) are in Egypt, where the population life in conditions of

extreme crowding and where rheumatic fever is frequent *(Shiokawa& Yamada, 1977).*

In Egypt, Keith pointed out that there was no striking sex difference in the overall incidence of rheumatic fever except with chorea, which is more common in females *(Keith, 1978).*

However, there is a higher incidence of rheumatic fever among females and this may be attributed to the fact that females in low income classes spend more time indoors under bad housing conditions with greater liability to repeated streptococcal infections *(Kassem et al., 1982).*

The high prevalence of rheumatic heart disease in some tropical areas like Egypt suggests a clinical modification of the condition in these areas where tight mitral stenosis is predominant in adolescents and young adults, possibly due to frequent repetition of rheumatic activity *(Taranta and Di Sciascio, 1980).*

Kassem *(Kassem et al., 1982)* reported that the incidence of the initial attack of RF is higher in spring followed by winter then autumn and lowest in summer.

FACTORS AFFECTING THE RATE OF RHEUMATIC FEVER:

Qualitative factors:

These factors are:

- The severity of the antecedent pharyngeal streptococcal infection.
- The magnitude of the immune response to the antecedent streptococcal infection.
- The duration of convalescent carriage of the organism.

(Stollerman 1990).

Variation in Group A Streptococcal Infections:

Variations in the rheumatogenicity of group A streptococcal strains are a factor influencing the attack rate of RF *(Stollerman, 1990)*. In the past, several studies suggested that RF was associated with infections due to virulent encapsulated 'mucoid' strains capable of causing strong type specific immune responses to M protein and other streptococcal antigens. Such strains belong to the classic M serotypes known to cause ARF *(Bisno, 1980)*.

The reappearance of severe epidemic rheumatic fever associated with the reappearance of these virulent strains has greatly strengthened the concept of rheumatogenic strains of group A streptococci. Thus, qualitative and quantitative changes in streptococcal pharyngitis have affected greatly the epidemiology of rheumatic fever in various parts of the world *(Stollerman, 1990)*.

Geography and Climate:

The relationship of RF and the intensity and severity of streptococcal disease is the same in the tropics as in the temperate climates. In prospective studies in which all patients suspected of having ARF were admitted and recurrent attacks were excluded, the frequency of the clinical manifestations of rheumatic fever is the same as in the studies in the United States *(Majeed, 1990)*.

Host Factors:

Age, sex, and race

Like streptococcal sore throat, ARF occurs most commonly in the young school age child, median age between 7 and 9 years, and very rarely in early infancy, It is estimated that 40% of strptococcal infections