Study of Overdiagnosis of Rheumatic Fever among School Aged Children

Thesis

Submitted for partial fulfillment of Master Degree in Pediatrics

By

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2011

دراسة زيادة تشخيص الحمى الروماتيزمية فى أطفـال المـدارس

رسالة

توطئة للحصول على درجة الماجستير

فى طب الأطفال

مقدمة من

الطبيبة/ هبه عبد الحميد إبراهيم سالم

بكالوريوس الطب والجراحة

كلية الطب – جامعة عين شمس (٢٠٠٤)

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2011

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Acknowledgment

*First all, I prais **Allah** almighty for helping me to proceed and to complete this work.*

*It is of my pleasure to express my grateful respect and gratitude to **Prof. Dr. Mona Mostafa El-Ganzoury,** Professor of Pediatric Ain Shams University hospitals, who suggested the subject, for his grateful help, supervision, guidance and moral support throughout the work.*

*I`d like to express my deep appreciation and profound gratitude to **Prof. Dr. Tarek Abd El-Gawad** Professor of Pediatric, Faculty of Medicine, Ain Shams University, for his effective guidance, valuable suggestions and unlimited help throughout the work as well.*

*And also special thanks to **Dr. Waleed El-Guindy** Lecturer of Pediatric, Faculty of Medicine, Ain Shams University, for his effective guidance, valuable suggestions and unlimited help throughout the work as well.*

I would also like to mention my thanks and sincere gratitude to my family, my mother, my Husband and My Son.

At last, full thanks to all colleagues and friends who helped me with this work.

Heba Abd El- Hamid


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قُل رَّبِّ زِدْنِي عِلْمًا
صدق الله العظيم
سورة طه الآية (١١٤)

Introduction

Rheumatic fever (RF) is an auto immune consequence of infection with Group a Beta Hemolytic Streptococci (GABHS). It causes an acute generalized inflammatory response and an illness that selectively affects the heart, joints, brain and skin. Despite the dramatic nature of acute episode, Acute Rheumatic Fever (ARF) leaves no lasting damage to the brain, joints or skin. However, damage to the heart valves particularly the mitral and aortic valves may persist after the acute episode has resolved this involvement of the cardiac valves is known as rheumatic heart ***(Carapetis et al., 2007).***

The diagnosis of rheumatic fever is still made mainly on clinical grounds, according to Johns criteria for diagnosis.

The probability of RF is high when evidence of previous streptococcal pharyngyal infection is detected with either 2 major disease manifestation or 1 major and 2 minor disease manifestation ***(Ferrier et al., 2002).***

Rheumatic fever is still the most common cause of acquired heart disease in many developing countries as in Egypt, India and South America ***(El Said et al., 1998),*** it causes 25-40% of all cardiovascular diseases in developing countries, disability and death from rheumatic heart disease are mainly caused by recurrent attacks and as peoples who have had ARF previously are much more likely to have subsequent episodes, so long acting penicillin is indicated fore those patients ***(Dundaroz et al., 2001).***

Rheumatic fever remains a major public health problem in developing countries. Physician awareness of rheumatic fever is generally high in developing countries but little is known about the accuracy of diagnosis of RF by physician in these countries, so there is overdiagnosis of rheumatic fever in children in certain developing countries ***(WHO, 1992).***

Aim of the Work

This study aimed to demonstrate the possibility of over diagnosis of RF among school aged children based only on their clinical picture and elevated Antistreptolysin of titre (ASOT) and not fulfilled by Jones criteria.

Epidemiology

Acute rheumatic fever (ARF) is a serious public health problem in developing countries. At the end of 20th century, after an apparent decline, ARF constituted a major challenge for developed and developing countries ***(Khriesat et al., 2003).***

A recent review of the global burden of GABHS-related disease estimated that there are at least 15. 6 million people with Rheumatic heart disease (RHD), another 1. 9 million with a history of ARF but no carditis, 470 000 new cases of ARF each year, and over 230 000 deaths due to RHD annually. Almost all cases and deaths occur in developing countries ***(Carapetis et al., 2007).***

Incidence and Prevalence of RF and RHD:

The overall quality of epidemiological data from developing countries is poor, particularly with respect to research documenting the incidence of ARF. According to WHO, at least 15.6 million people have rheumatic heart diseases (RHD). 300,000 of about 0.5 million individuals who acquire acute rheumatic fever (ARF) every year go on to develop RHD, and 233,000 deaths annually are directly attributable to ARF or RHD. However, these estimates are