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*Affectionately dedicated to...*

*My Parents*

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## LIST OF ABBREVIATIONS

AI	Aortic incompetence
ARF	Acute rheumatic fever
CRP	C-reactive protein
ECG	Electrocardiogram
ESR	Erythrocyte sedimentation rate
Ig	Immunoglobulin
LAP	Long acting penicillin
MI	Mitral incompetence
MS	Mitral stenosis
PAF	Platelet activating factor
PBP	Penicillin binding protein
PPL	Penicilloyl polylysine
RAST	Radioallergosorbent test
Rhic	Rheumatic
SD	Standard deviation
SRS-A	Slow reacting substances of anaphylaxis
TI	Tricuspid incompetence
Yrs	Years

# *Introduction*

## INTRODUCTION

Rheumatic fever causes 25–40% of all cardiovascular diseases in developing countries. Disability and death from rheumatic heart disease are mainly caused by recurrent attacks (*Markowitz and Kaplan, 1991*).

Long term studies on acute rheumatic fever and the evolution of rheumatic heart disease before the era of antibiotics described an aggressive and progressive course of acute rheumatic fever, followed by a high prevalence rate of rheumatic heart disease (*Majeed et al., 1992*).

Because of the impact of this disease on public health and the proven efficacy of antibiotic prophylaxis, the World Health Organization has helped to establish programmes for prevention of rheumatic fever in developing countries. A single intramuscular injection of 1.2 million units of benzathine penicillin every 4 weeks is the most widely used method for antibiotic prophylaxis (*Strasser et al., 1981*).

Penicillin is the most common drug causing allergic reactions. Allergy to penicillin has been reported to range from 1–10% of patients treated, with up to 10 percent of these reactions being life-threatening (*Anderson, 1980*).

Apart from clinical history, which has been proved to be of major importance in the correct diagnosis of drug hypersensitivity, there are two methods for confirming or excluding the diagnosis: (1) skin tests using major and minor determinants of penicillin; (2) penicilloyl specific IgE antibodies measured by the radioallergosorbent test (RAST) (*Blaiss and Deshazo, 1988*).

The radioallergosorbent test in its present form can only identify reactions due to major determinants and it must therefore be considered of limited value in the diagnosis of penicillin allergy (*Lonnevig et al., 1988*).

At present, skin testing is the only reliable technique for evaluation of penicillin allergy (*Blaiss and Deshazo, 1988*).

## *Aim of Work*

## AIM OF WORK

### **The aim of the present study is to:**

- Determine the incidence of allergic reactions to long-acting benzathine penicillin among rheumatic patients who receive long-term prophylaxis with benzathine penicillin via careful history taking.
- Assess our technique of performance of the skin test through calculation of the indices of the diagnostic test which include sensitivity, specificity and efficiency of the test.
- Estimate the level of total IgE in the sera of the allergic patients.