

Original Research

Assessment of cases of Acute Rheumatic Fever in adults

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ABSTRACT:

Background: Acute rheumatic fever (ARF) is a non-suppurative sequela that occurs two to four weeks following group A Streptococcus (GAS) pharyngitis and may consist of arthritis, carditis, chorea, erythema marginatum, and subcutaneous nodules. The present study was conducted to assess cases of ARF in adults. **Materials & Methods:** The present study was conducted on 62 patients of acute rheumatic fever of both genders. Chest x-rays, electrocardiograms (EC&), ESR, and blood counts were performed in all patients. **Results:** Out of 62 patients, males were 32 and females were 30. Existing valvular lesion was seen in 25, previous attack of AF in 29, paroxysmal dysarthmia in 12 and cardiac enlargement in 57. The difference was non-significant ($p > 0.05$). **Conclusion:** Authors found that most common parameters was existing valvular lesion, previous attack of AF, paroxysmal dysarthmia and cardiac enlargement.

Key words: Acute rheumatic fever, dysarthmia, Electrocardiograms.

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INTRODUCTION

Acute rheumatic fever (ARF) is a non-suppurative sequela that occurs two to four weeks following group A Streptococcus (GAS) pharyngitis and may consist of arthritis, carditis, chorea, erythema marginatum, and subcutaneous nodules. Damage to cardiac valves may be chronic and progressive, resulting in cardiac decompensation. The natural history of acute rheumatic fever (ARF) and rheumatic heart disease (RHD) is not as well known in adults as in children.¹ Friedberg¹ has claimed, on the basis of 20 yr clinical experience, that attacks of ARF do not occur in later life, or that, if they do occur, a new valvular lesion does not develop. However, there have been many well documented reports of ARF in adults. Acute rheumatic fever (ARF) is one of the nonsuppurative complications (others include scarlet fever and acute glomerulonephritis [AGN]). There is a latent period of two to three weeks following the initial pharyngitis before the first signs or symptoms of ARF appear. The disease presents with various manifestations that may include arthritis or

arthralgia, carditis, chorea, subcutaneous nodules, and erythema marginatum.²

The mean incidence of ARF is 19 per 100,000 school-aged children worldwide, but it is lower (≤ 2 cases per 100,000 school-aged children) in the United States and other developed countries. In many low- and middle-income countries and in certain Indigenous populations, such as those in Australia and New Zealand, the incidence of ARF is substantially higher, with some of the highest rates reported in Indigenous Australians at 153 to 380 cases per 100,000 children aged 5 to 14 years.³ The present study was conducted to assess cases of ARF in adults.

MATERIALS & METHODS

The present study comprised of 62 patients of acute rheumatic fever of both genders. All were informed regarding the study and written consent was obtained. General information such as name, age, sex etc. was recorded. A thorough clinical examination was done in all patients. Chest x-rays, electrocardiograms (EC&),

ESR, and blood counts were performed in all patients. Serum-protein levels and CRP were estimated. Renal and liver function and calcium levels were measured in most patients, and other serologic tests such as Rose-

Waler and antinuclear factor were performed when indicated. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 62		
Gender	Males	Females
Number	32	30

Table I, graph I shows that out of 62 patients, males were 32 and females were 30.

Graph I Distribution of patients

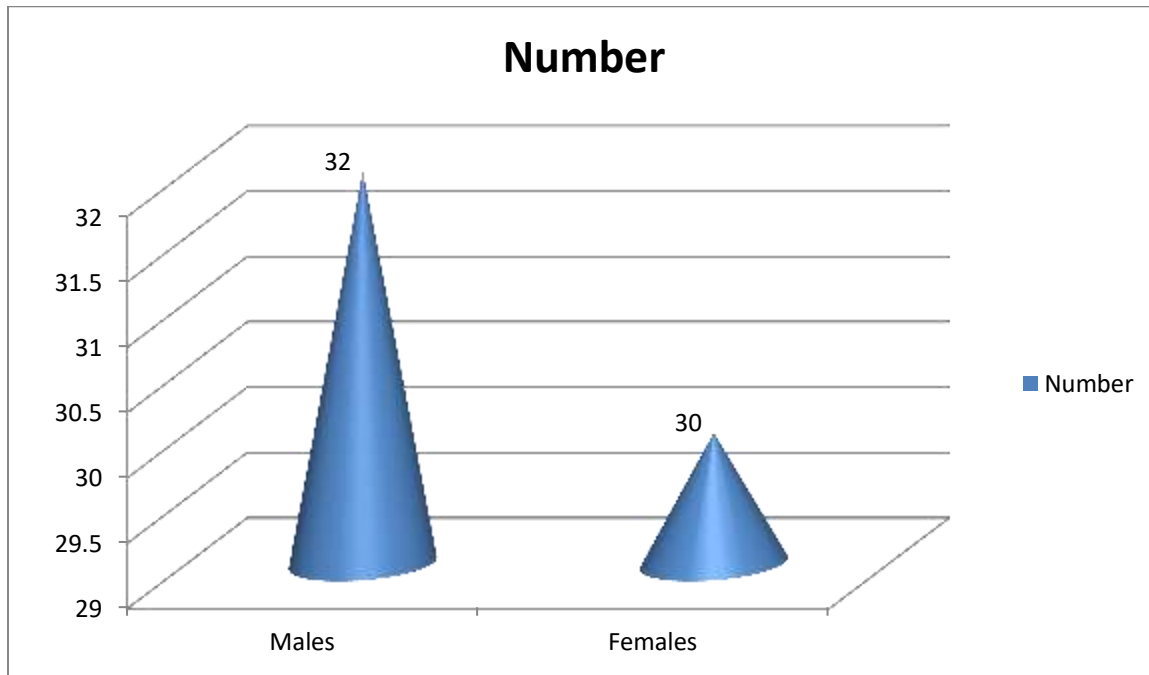
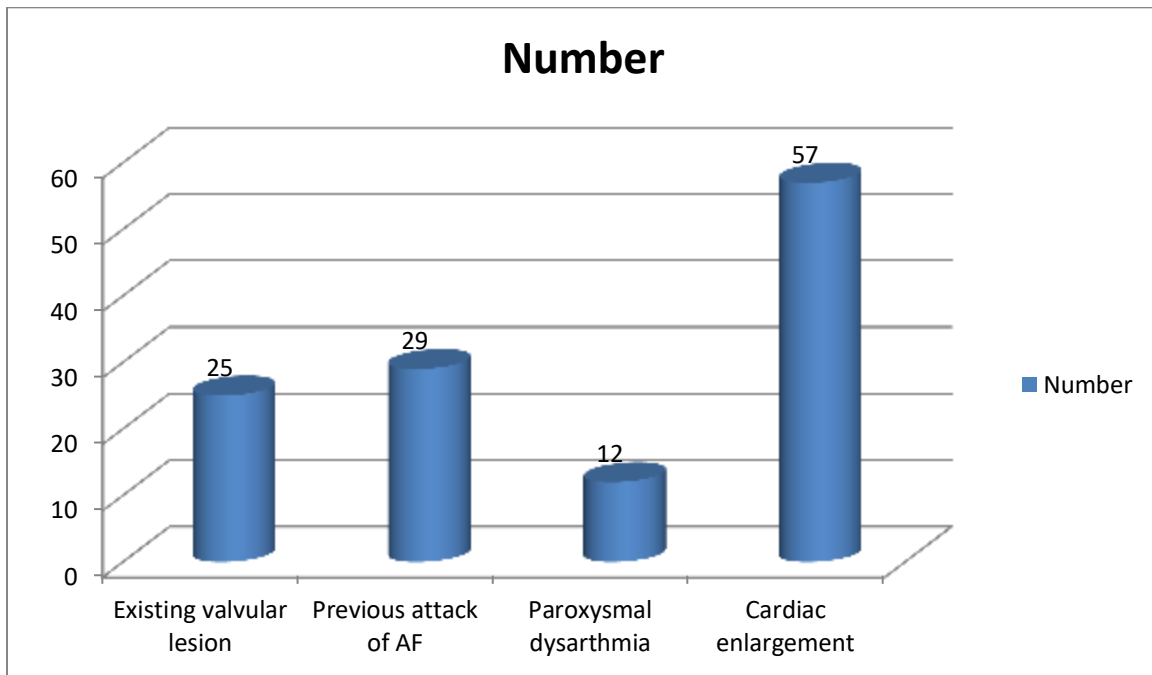


Table II Assessment of parameters in patients

Parameters	Number	P value
Existing valvular lesion	25	0.14
Previous attack of AF	29	
Paroxysmal dysarthmia	12	
Cardiac enlargement	57	

Table II, graph II shows that existing valvular lesion was seen in 25, previous attack of AF in 29, paroxysmal dysarthmia in 12 and cardiac enlargement in 57. The difference was non- significant ($p > 0.05$).

Graph II Assessment of parameters in patients



DISCUSSION

Acute rheumatic fever is a multisystem inflammatory disease that occurs mostly in children and young adults after a group A streptococcus infection (usually after pharyngitis). Carditis is a common presentation at diagnosis and, if untreated, can lead to heart failure, atrial fibrillation, and subsequent cardioembolic complications.⁴ More than 60% of patients with acute rheumatic fever develop rheumatic heart disease, characterised by long-term damage to the heart valves. In developing countries, the prevalence of rheumatic heart disease is a staggering 1–5 cases per 1000 among school-age children; without medical care, these patients will be at risk of embolic stroke later in life.⁵ It is estimated that at least 3–7.5% of new strokes each year worldwide are directly due to rheumatic heart disease. In other words, over 300 000 stroke deaths per year could be prevented by tackling rheumatic heart disease. These figures are likely to be a gross underestimation in areas of high endemicity; for instance, a hospital-based stroke registry in eastern Iran found rheumatic heart disease in almost 45% of patients admitted with cardioembolic stroke.⁶ Although the most common clinical complication in patients with acute rheumatic fever is fibrosis of the heart valves, the CNS can also be affected by the inflammatory reaction caused by streptococcal infection. A major manifestation of this autoimmune reaction is Sydenham's chorea, which is still the most common cause worldwide of acute chorea in children. In about 20% of patients, is the sole initial presentation,

although most patients also have subclinical cardiac involvement.⁷ Hence, the assessment of cardiac injury at diagnosis is mandatory, and coordinated care by paediatric cardiologists and neurologists is warranted. For many children, particularly in Africa and South America, Sydenham's chorea is not a benign and self-limited condition that remits after a few months. Choreic and ballistic movements can be disabling and, together with neuropsychiatric symptoms, may substantially impinge on quality of life.⁸ The present study was conducted to assess cases of ARF in adults. In present study, out of 62 patients, males were 32 and females were 30. Existing valvular lesion was seen in 25, previous attack of AF in 29, paroxysmal dysarthria in 12 and cardiac enlargement in 57. Hershko et al⁹ found that the natural history of acute rheumatic fever (ARF) in adults has been studied from an analysis of 23 patients together with a review of a further 466 published cases. In contrast to the picture in juvenile ARF, in present patients (average age 55 yr), only arthritis (83%) and carditis (35%) were major criteria for the diagnosis. All patients had at least 3 minor criteria. 39% of the patients, average age 56 yr were seen in their initial attack of ARF. In those patients with a previous history of rheumatic fever, the mean interval between the index attack and the first illness was 20.5 yr. Contact with young children appeared to be an important predisposing factor. None had an ESR of less than 50 mm in the first hour, even in the presence of cardiac failure. Findings in the acute illness included anemia (70%), hyperglobulinemia

(70%), urinary sediment (66%), and hypercalcemia in 7 out of 12 cases. The response to treatment was good and only 1 patient of 13 followed-up developed a new valvular lesion.

A survey of the literature shows that attacks of ARF may occur at any age; death in the acute episode is rare and occurs only in patients with severe preexisting valvular disease with congestive failure. The problem of diagnosing active carditis in the presence of rheumatic heart disease (RHD) is discussed. While juvenile ARF may be overdiagnosed, the diagnosis may be missed in the adult rheumatic patient whose cardiac state inexplicably deteriorates. In such patients evidence for a preceding streptococcal infection should be sought. Patients with a high risk of developing ARF include those with carditis in previous attacks, with preexistent RHD, and with several children in the family.¹⁰ These factors should be considered when advising on the duration of antibiotic prophylaxis.

CONCLUSION

Authors found that most common parameters was existing valvular lesion, previous attack of AF, paroxysmal dysrhythmia and cardiac enlargement.

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