Management of acute rheumatic fever

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Management of rheumatic fever is outlined. It is emphasized that prevention of rheumatic fever is more important than treating the disease. Aspirin and steroids suppress the rheumatic inflammation but do not cure it. In the presence of cardiac involvement we prefer to use steroids as compared to aspirin. If congestive cardiac failure is present, the management must include steroids since aspirin treated patients have a higher mortality.

Key words: Rheumatic fever, management

Rheumatic fever (RF) is an acute inflammatory disease characterized by fever, arthritis or arthralgia, carditis, subcutaneous nodules, erythema marginatum and chorea. The diagnosis can be suspected clinically and substantiated by investigations. However, there is no specific diagnostic test available to conclusively prove the diagnosis. Jones criteria, modified and later revised by the American Heart Association are helpful in suggesting the diagnosis of acute RF (Table 1). The purpose of this review is to outline the management of acute RF. The management can be considered under the following headings:

1. Management of acute stage.

Prevention of rheumatic fever and its recurrences were described in Part I of this symposium (May-June, 1981 Issue). Management of a patient with rheumatic heart disease is outside the scope of the present article.

Management of acute rheumatic fever

Once the diagnosis of RF is clear it is best to hospitalize the patient specially if there is cardiac involvement. Hospitalization ensures rest which may not be feasible in the setting of home environment in our country.

Bed rest

Initially strict bed rest is advisable specially in the presence of cardiac involvement. By reducing the work load of the heart it may reduce the residual damage to it. In patients without cardiac involvement the bed rest should be continued for at least two weeks after the erythrocyte sedimentation rate has returned to normal. Patients who have cardiac involvement should be kept on bed rest for four to six weeks after the sedimentation rate has returned to normal.
Table 1. Criteria For Diagnosis of Rheumatic Fever

<table>
<thead>
<tr>
<th>Major criteria</th>
<th>Minor criteria</th>
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<tbody>
<tr>
<td>Carditis</td>
<td>I. Clinical</td>
</tr>
<tr>
<td>Arthritis</td>
<td>(a) Fever</td>
</tr>
<tr>
<td>Subcutaneous nodules</td>
<td>(b) Arthralgias</td>
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<tr>
<td>Chorea</td>
<td>(c) Previous RF or rheumatic heart disease</td>
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<tr>
<td>Erythema marginatum</td>
<td>II. Laboratory</td>
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<td></td>
<td>(i) Acute phase reactants, leucocytosis, elevated sedimentation rate, presence of C-reactive protein.</td>
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<td></td>
<td>(ii) Prolonged PR interval in the electrocardiogram.</td>
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Two major criteria or one major and two minor criteria in the presence of evidence of recent streptococcal infection indicate the presence of rheumatic fever. The evidence for streptococcal infection is indicated by (a) positive throat culture, (b) evidence for recent scarlet fever, and (c) increased antistreptolysin ‘O’ titre or other antistreptococcal antibody titres.

**Diet**

High calorie diet with supplements of multivitamins is useful. Salt restricted diet is not indicated in patients of acute RF with or without carditis but who do not have congestive failure. In the presence of congestive cardiac failure salt restriction may be necessary if digitalis and diuretics do not control the failure effectively. It is necessary to emphasize that children on salt free diet may be difficult to handle as they become irritable and refuse to eat. Increasing the diuretic dosage combined with moderate restriction of salt may be preferable if the child refuses salt free diet.

**Penicillin**

The patient should have throat cultures taken at the time of diagnosis and should be put on benzathine penicillin 1,200,000 units intramuscularly every 21 days. According to the recommendation of the American Heart Association it is not necessary to give twice daily procaine penicillin (400,000 units) for 10 days before starting benzathine penicillin. However, in the overcrowded conditions of India we have continued to use the ten day procaine penicillin course before starting benzathine penicillin. Penicillin has to be continued as indicated below whether the patient has or does not have carditis. Ideally the penicillin should be given life long. Less than ideal would be to continue it till the age of 35 years. The least desirable is to give penicillin for at least five years from the last attack of RF.

**Suppressive therapy**

There is no specific curative treatment for RF. As such, prevention of RF as well as prevention of recurrences with the use of penicillin should be the main objective of management. After the onset of rheumatic fever suppressive therapy in the form of salicylates or steroids has been utilized. Both salicylates as well as