



Federal Ministry of Health
Rheumatic Heart Disease Prevention Protocol

Manual 2
Secondary Prevention for Physicians
Last updated Feb /2014

Protocol for Management of Acute Rheumatic Fever
(Secondary Prevention)

DIAGNOSIS OF RHEUMATIC FEVER

Acute Rheumatic Fever (ARF) is diagnosed by

The Jones Criteria

Major Criteria: Five

1. **Arthritis:** migratory, involve large joints, resolve within few days
2. **Carditis:** Typical murmurs:
 - a. Pansystolic murmur at apex radiating to the axilla (mitral regurgitation)
 - b. Mid diastolic apical murmur (Carr-Saunders murmur) due to mitral valvulitis
 - c. Early diastolic murmur at aortic area 2 associated with large volume pulse (aortic regurgitation)

Murmurs may or may not be associated with:

Congestive heart failure (CHF)

Pericardial rub

3. **Chorea (can be the only manifestation)**
4. **Subcutaneous nodules**
5. **Erythema marginatum**

Minor Criteria: Four

1. Fever
2. Arthralgia
3. Prolonged PR interval on ECG
4. Raised acute phase reactants (ESR, CRP, Total WBC count)

New patients are different from those with known rheumatic heart disease (RHD)

Diagnosis of ARF in New Patients

2 Major criteria OR

One major plus 2 minor criteria

Plus

Evidence of streptococcal infection (high or rising ASO)

Chorea alone is diagnostic of ARF

No need for aspirin

Treat by haloperidol or carbamazepine and start prophylaxis

Diagnosis of ARF in Patients known to have RHD

One major OR

2 minor criteria

Plus

Evidence of streptococcal infection (high or rising ASO)

Management

1. Anti inflammatory:

- Aspirin 75 mg per kilogram per day divided 6 hourly after meals. Do ESR 2 weekly, taper aspirin by decreasing the dose by 2 tablet every week
- Patients **not responding** (clinically and/or by acute phase reactants) or **not tolerating** aspirin can be started on **prednisolone** 2mg per kilogram per day for 2 weeks
- **then** aspirin is **added** (dose 60 mg per kilogram per day) for another 2 weeks
- **then** prednisolone is tapered & discontinued.
- Do ESR 2 weekly, taper aspirin by decreasing the dose by 2 tablets every week.

2. Antibiotic:

One injection of benzathine penicillin **for treatment** then **regular 3 weekly benzathine penicillin** for secondary prophylaxis(dose and precautions below).

3. Duration of prophylaxis:

- Patients without carditis: till 25 years of age.
- Patients with carditis: For life

4. Carditis: if there is heart failure start furosemide 1-2 mg per kilogram per day.

Consult cardiologist

5. Bed rest: 4 weeks

6. Fill the form and **NOTIFY** the Ministry of Health, National Program of RHD Control (phone).

7. Ask about family members: those with sore throat are given one injection of benzathine or oral antibiotics for 10 days.

8. Bacterial endocarditis prophylaxis: for those with valve lesions going for procedures leading to bactremia, e.g. dental procedures give one dose of amoxicillin 50mg/kg one hour prior to procedure.

9. Family education:

Continue benzathine penicillin 3 weekly up to 25 years of age (if no carditis) and for life (if there is rheumatic HD)

Sore throat can lead to serious heart damage

Good dental hygiene prevents complications of heart disease

Appendix:

How to give Benzathine Penicillin

The Penicillin Kit

Penicillin vial
Lidocaine
Antihistamine
Adrenaline
2 needles (one for sensitivity test one for injection)
10 ml syringe

1. Ask about history of penicillin allergy
2. If there is history of penicillin allergy do a **Prick skin test**

Prick skin test

- Dilute one vial in 10 ml distilled water
 - Take 0.1 ml and add 10 ml to it (penicillin diluted 100 times)
 - Scratch the skin with 0.1 ml of this solution
 - Wait for 20 minutes
 - Positive test: redness, wheal or itching
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- If prick test is **positive: Don't give penicillin**
 - **Dose: >7 years: 1.2 million units**
 - **< 7 years: 600 000 units**
 - If prick test is **negative: do an intradermal sensitivity test.**

Intradermal Skin Test
Has to be done before *each* injection

1. Dilute penicillin (1.2 million units) in 10 ml distilled water
2. Inject 0.2 ml intradermally to form 2-3 mm wheal
3. Wait for 20 minutes
4. Positive test: wheal 5 mm or more with redness, itching

NEVER GIVE INJECTION IN PATIENTS WITH POSITIVE TEST

NO SENSITIVITY: GIVE INJECTION DEEP IN GLUTEAL MUSCLE

Penicillin can be diluted in Lidocaine to decrease pain

In case of penicillin sensitivity:

Erythromycin BD for 10 days (for treatment) and for the duration of secondary prophylaxis

Dose:

Less than 7 years: 250 mg BD for 10 days (for treatment) and for the duration of secondary prophylaxis

More than 7 years: 500 mg BD for for 10 days (for treatment) and for the duration of secondary prophylaxis.