ACUTE RHEUMATIC FEVER (ARF)

Case Definition

1. CONFIRMED ACUTE RHEUMATIC FEVER

i. Evidence of recent streptococcus A infection
i.e. elevated antiDNAase or ASOT (repeat titres 4 weeks later if initial results are inconclusive) **or** group A streptococcus grown from throat swab **and**

ii. Jones Criteria
i.e. **2 MAJOR or 1 MAJOR + 2 MINOR** (see box below).

MAJOR:

- **carditis** (diagnosed by presence of sinus tachycardia **or** murmur of mitral regurgitation **or** S3 gallop **or** pericardial friction rub **or** cardiomegaly **or** echo showing evidence of valve damage)
- **migratory polyarthritis**
- **erythema marginatum**
- **subcutaneous nodules**
- **chorea**

MINOR:

- **arthralgia**
- **fever > 38°**
- **elevated acute phase reactants (ESR/CRP > 30)**
- **prolonged PR interval**

2. SUSPECTED ACUTE RHEUMATIC FEVER

Many people do **not** meet Jones criteria but do have ARF in retrospect so warrant treatment for ARF and close followup with specialist review and echocardiography i.e. patients with

- **isolated chorea** or
- **large joint arthritis with effusion** and no clear diagnosis if age < 30 years or
- **arthritis** in people < 30 years with a personal, family or household **history of ARF/RHD.**

Principles of Management

- All cases should be discussed with the regional paediatrician / physician.
- Admit everyone with heart failure, carditis or rhythm disturbance.

BASELINE ASSESSMENT:

Document criteria used to make diagnosis.

ECG at initial presentation and then daily if admitted.

Investigations:

Microbiology – swab throat and any infected skin sores; blood cultures if temperature ≥ 38°C.

Bloods – FBE, ESR, CRP, ASOT, anti-DNAase.

Joint effusions – if significant, aspirate for MC&S, cell count and differential and crystals.

Radiology – CXR if admitted.

Therapeutic Protocols

Give Benzathine penicillin IMI stat

Forms – use either:

- LA Bicillin 900mg/2.3ml (preferred), **OR** if unavailable:
- Panbenzathine penicillin (900mg or 1.2 m units per vial).

Dose:

- Adults and children > 20kg: 900mg stat.
- Children < 20kg: 450mg stat.

Aspirin 900 - 1200mg qid adults; children discuss first with paediatrician.

Discuss treatment for **chorea** with the regional paediatrician / physician.

Follow–up

ALL people with **confirmed or suspected ARF** should have:

1. REVIEW BY LOCAL HEALTH PROVIDER *one week* after initial presentation to:

- confirm and document initial presentation including ECG, joint pain and fever.
- repeat ECG.
- note any response to aspirin.
- consider joint aspiration.
- consider alternative diagnoses.
- organise repeat ASOT and antiDNAase titres 4 weeks after initial titres if initial titres were inconclusive.

2. ECHOCARDIOGRAM:

At diagnosis if at all possible, and at a minimum within three months of initial presentation and if normal, one year following this.

3. REVIEW BY PHYSICIAN/PAEDIATRICIAN:
within three months of initial presentation **and** preferably following the echocardiogram.

4. EDUCATION:
about rationale for long term prophylaxis of ARF and the risks of no prophylaxis.

5. PROPHYLAXIS (to prevent further ARF):

every 4 weeks benzathine penicillin

Use either:

- LA Bicillin 900mg/2.3ml (preferred), **OR** if unavailable:
- Panbenzathine penicillin (900mg or 1.2 m units per vial).

Dose:

- Adults and children > 20kg: 900mg stat.
- Children < 20kg: 450mg stat.

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Follow–up (continued)

benzathine penicillin is superior to any oral prophylaxis and should be used except when there is severe documented allergy to penicillin when oral **erythromycin** 250mg twice a day is indicated (all ages).

DURATION OF PROPHYLAXIS:

i. No RHD/normal valves on echocardiogram:

Until 21 years old or 10 years since last episode of ARF whichever is **longer** (MUST have echocardiogram at 21 years **before** stopping to confirm no RHD).

ii. RHD/consistent valve changes on echocardiogram:

Mild or moderate changes: Until 35 years old or 10 years after last episode of ARF whichever is longer.

Severe changes: Until 40 years old or 10 years after last episode of ARF whichever is longer.

Prevent skin sores!! Treat patient and family EARLY and OFTEN for scabies and impetigo.

Refer / Discuss

TO PHYSICIAN / PAEDIATRICIAN:

- All people with confirmed or suspected ARF.

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