



Protocols for antibiotic use in primary and secondary prevention of rheumatic fever

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Several guidelines and studies that address the issue of 'best practice' in the primary and secondary prevention of rheumatic fever (RF) have been published recently.¹⁻⁴ Here I present a summary of the latest recommendations for the prevention of RF that have been distilled from these sources.

Primary prevention of RF

The prevention of the first attack of RF requires antibiotic treatment of suspected or proven streptococcal throat infection or tonsillitis in children between the ages of 3 and 15 years.⁴ In communities where RF is endemic, all cases of sore throat in children 3 - 15 years of age should be regarded as a streptococcal infection and be treated as such *unless* any one of the following clinical characteristics, which indicate that the sore throat should not be diagnosed as a 'strep' throat, is present: ulceration, hoarseness, watery nasal secretion, and/or conjunctivitis.¹ Children not diagnosed with streptococcal pharyngitis should be treated symptomatically. If laboratory services are available, diagnosis of 'strep' sore throat should be confirmed microbiologically, but this confirmation should not delay the initiation of treatment. The recommended treatment of 'strep' throat is set out in Table I.

Table I. Treatment of 'strep' throat (3 -15 years) (primary prevention)

Antibiotic	Mode of administration	Dose
Benzathine penicillin	Intramuscular (keep child under observation for 30 minutes)	Single dose > 30 kg: 1.2 MU < 30 kg: 600 000 - 900 000 U
OR		
Phenoxymethyl penicillin	Oral	> 30 kg: 500 mg b.d. or 250 mg q.i.d. < 30 kg: 125 mg q.i.d.
OR		
if history of penicillin allergy (rare)		
Erythromycin	Oral	> 30 kg: 500 mg b.d. or 250 mg q.i.d. < 30 kg: 125 mg q.i.d.

Secondary prevention of RF

Secondary prevention requires notification of the initial attack of RF (and the first diagnosis of rheumatic heart disease (RHD) if no history of RF) in some countries (e.g. South Africa), and drug treatment every 2 - 4 weeks (Table II). Intramuscular penicillin

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Table II. Secondary prevention of recurrent rheumatic fever

Antibiotic	Mode of administration	Dose
Benzathine penicillin	Intramuscular (keep child under observation for 30 minutes)	Given every 2 - 4 weeks > 30 kg: 1.2 MU < 30 kg: 600 000 - 900 000 U
OR		
Phenoxymethyl penicillin	Oral	> 30 kg: 250 mg b.d. < 30 kg: 125 mg b.d.
OR		
if history of penicillin allergy		
Erythromycin	Oral	> 30 kg: 250 mg b.d. < 30 kg: 125 mg b.d.

Table III. World Health Organization recommendations for duration of secondary prevention for rheumatic fever

Category of patient	Duration of secondary prevention
Patient without proven carditis	For 5 years after last attack, or until 18 years of age (whichever is longer)
Patient with mild carditis (mild mitral regurgitation or healed carditis)	For 10 years after the last attack, or at least until 25 years of age (whichever is longer)
More severe valvular disease	Lifelong
After valve surgery	Lifelong

should be encouraged in all patients; it is more effective than oral penicillin and results in better compliance.^{1,3} The new World Health Organization recommendations for the duration of secondary prevention are presented in Table III.²

Conclusion

The persisting problem of RF and RHD may be due in part to the failure of health care professionals to adopt existing guidelines on the prevention of RF.⁵ Penicillin, which is the cornerstone of any RF prevention programme, is cheap and widely available. The challenge is to bridge the gap between evidence and practice in countries where RF and RHD remain a major public health problem.

References

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