

Diagnosing, treating sore throat (primary prevention) should be part of strategy to prevent rheumatic heart disease

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Diagnosing and treating sore (strep) throat (primary prevention) in children and adolescents to prevent such cases developing into acute rheumatic fever (ARF) and rheumatic heart disease (RHD) should be a cornerstone in any overall RHD strategy. The issues around primary prevention are discussed in one of the papers in the RHD special issue of *Global Heart* (the Journal of the World Heart Federation) by authors Dr Liesl Zühlke, University of Cape Town and Red Cross War Memorial Children's Hospital, Cape Town, South Africa, and Dr Ganesan Karthikeyan, All India Institute of Medical Sciences, New Delhi, India.

Up to one in four cases of sore throat are caused by Group A Streptococcal (GAS) infections that can lead if untreated to ARF/RHD. Simple treatment with oral penicillin or amoxicillin, or injected benzathine penicillin G (BPG-the same treatment used in [secondary prevention](#)) can cure such cases relatively easily and at low cost. Studies have found that treating strep throat with BPG can reduce the risk of subsequent ARF by 70-80%. "Primary prevention is an essential tool for prevention in the absence of a cure for ARF and RHD, and the monumental expense of surgical intervention in patients with these conditions," say the authors.

The obstacles to including primary prevention include the actual diagnosis of [strep throat](#) (group A strep pharyngitis), treatment options and patient and physician awareness about the possible consequences of

an untreated sore throat. For many families in low-income and middle-income countries, a [sore throat](#) is simply not considered serious enough to warrant a visit to the nearest medical centre, which could be many miles away.

A further issue is the positioning of primary prevention within a control program, and whether introducing widespread screening and treatment in schools is cost-effective. Here, the authors point to the success that was had in Cuba, Costa Rica, Martinique, and Guadeloupe, all of who used a comprehensive strategy involving syndromic treatment of suspected GAS pharyngitis with penicillin which was introduced and maintained for over 10 years. There was also a concerted educational campaign that attempted to involve and target the public, social and educational professions, and media campaigns to raise awareness in each of these locations.

The authors say: "Following on from the excellent work carried out in Cuba, Costa Rica, and other countries, similar programs have now evolved in several other sites, a world-leading program of RHD control in Pacific Island nations has individuals from Tonga, Fiji, and Samoa at the helm, whereas the ASAP (Advocacy, Surveillance, Awareness and Prevention) program, under the auspices of the Pan-African Society of Cardiology has galvanized efforts in Africa to combat this disease."

They add that these efforts have been met with renewed support from global organizations such as the World Heart Federation, which has made a major commitment to leading the charge on RHD control, supporting programs in the Pacific and Africa, establishing an international web-based resource in RF/RHD, and, in their most recent strategic plan, committing to 'eliminating rheumatic fever and minimizing the burden of [rheumatic heart disease](#)'.

They conclude: "Rheumatic heart disease is unique among chronic

cardiovascular diseases in several ways. It is entirely preventable. It is among the few chronic cardiovascular diseases of childhood, adolescence, and young adulthood, and straddles the silos of infectious and non-communicable diseases and, therefore, represents perfectly the needs of developing countries in the 21st century, now dealing increasingly with this double burden. Primary prevention is the cornerstone of any RHD program and integration into existing primary care systems should be a priority."

Provided by World Heart Federation

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