***Letter to editor re: AHA Scientific statement; Contemporary diagnosis and management of Rheumatic Heart Disease ….***
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Shyam S Kothari, All India Institute of Medical Sciences (AIIMS)

I was interested to read the excellent recent AHA scientific statement on contemporary diagnosis and management of rheumatic heart disease (RHD) that envisage to close the gaps in the knowledge regarding RHD (1). While covering all the contemporary areas of importance regarding the disease that still ravages population of the world in many areas; I think the document has done less than an objective analysis of evidence in a few controversial areas that needs to be brought out in such a scientific document, if the research in RHD has to get the right focus. It should not be forgotten that the outcome data about the efficacy of secondary prophylaxis with penicillin are not robust and the question about its appropriate use is an open question. (2) The Cochrane review found the evidence of efficacy of penicillin based on the poor quality data,(3) and the most often quoted study of the effectiveness of secondary prophylaxis lacked control group(4), like many other studies as well. And the duration of prophylaxis, if effective, might be only in the initial few years as the recurrences are higher in the initial period. The scientific statement has made allowance for the lack of data in the latent and borderline cases, but the issue is germane to the whole of RHD as such.

The obvious implication of overreliance on penicillin prophylaxis is in extrapolating the recommendations to the group of subclinical carditis where penicillin prophylaxis has not been shown to be effective. Fig 3 of the document covertly suggests this approach. Combining the latent and subclinical carditis in this regard of secondary prophylaxis, as done in the document, might unnecessarily create a large number of school children that need not receive the injections but the enthusiastic physicians might just do that.

Further, the long term morbidity of RHD result from valve damage that is often severe in the initial episode(s). (5) The recurrent episodes worsen the clinical status, but the importance of the first episode is lost in this narrative. Even the recent Australian study quoted in the document (6) found that the progression to heart failure is rapid in the initial years attesting to the importance of initial damage. As such, the research focus is needed in the treatment of the first episode as well, if the long term morbidity is to be reduced.

**References:**

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**Response to Letter Regarding "Contemporary Diagnosis and Management of Rheumatic Heart Disease: Implications for Closing the Gap: A Scientific Statement From the American Heart Association"**

Raman Krishna Kumar, MD, DM; Andrea Beaton, MD; Craig Sable, MD

We thank Dr. Kothari for this insightful letter. We concur that important questions remain with regards to duration, optimal dosing interval, and best formulation for prophylaxis. Additionally, there are important practical challenges that relate to penicillin availability as well as perceptions on the safety of benzathine penicillin. Research to answer these long outstanding questions should be prioritized. However, while we await these answers, we cannot ignore that there is unequivocal evidence that secondary antibiotic prophylaxis with benzathine benzylpenicillin G reduces recurrences of acute rheumatic fever, confers positive outcomes in patients with a history of rheumatic fever, and slows progression of carditis in patients diagnosed with rheumatic fever.[1, 2] As a result, all existing guidelines recommend secondary antibiotic prophylaxis,[3] and therefore it is appropriate for our statement to make the same recommendation.

Latent rheumatic heart disease, detected through active case finding with echocardiography, is a relatively new classification and deserves separate consideration. While numerous studies, from low-resource settings in nearly all world regions, have found a substantial burden of latent RHD, the utility of secondary antibiotic prophylaxis to prevent latent RHD progression remains unknown.[4] The GOAL trial (clinicaltrials.gov NCT03346525), which concluded follow-up in October 2020, may provide the critical evidence needed to guide recommendations. Until these results are available, we agree that Figure 3 could be interpreted to recommend secondary antibiotic prophylaxis for all patients with latent RHD, which was not our intent. We have modified this figure to improve consistency with the text.

We also agree that the severity of initial carditis during rheumatic fever is a strong predictor of the severity of valvular involvement in chronic rheumatic heart disease. We acknowledge that we did not specifically highlight this fact in the current statement. However, we would also like to re-emphasize that diagnosis with rheumatic fever is less common among contemporary patients with established rheumatic heart disease than it was in historical cohorts. Indeed, a majority of patients in many lower-income settings do not recall rheumatic fever, yet present with advanced rheumatic valvular disease and complications.[5] Research is needed to understand this diagnostic gap and to develop novel strategies to improve ARF diagnosis in the lowest resourced settings.

Most importantly, Dr. Kothari's letter reminds us that critical research gaps exist for rheumatic fever and rheumatic heart disease. Best practices date largely from research conducted in the mid-20$^{th}$ century in the US and other now high income populations, which may not translate to the RHD-endemic settings of today. The 2018 World Health Assembly Rheumatic Heart Disease Resolution reprioritized RHD in global health agendas. It is urgent that the research community follow suit if we are to defeat one of the world's most solvable health disparities.

**References**


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These corrections have been made to the current online version of the article, which is available at:
https://www.ahajournals.org/doi/10.1161/CIR.0000000000000921