Letter to the Editor

Pakistan Journal of Public Health
https://doi.org/10.32413/pjph.v14i4.1509
www.pjph.org

Rheumatic Heart Disease: Roadblocks and Interventions

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Pakistan finds itself in an intractable situation of a high disease prevalence with 2,340,900 cases as of 2021 of Rheumatic Heart Disease (RHD), a preventable yet fatal chronic disease if left untreated, mainly affecting the underprivileged peadiatric and young adult population. In 2021 alone it caused 24,200 lives in Pakistan (1). The causative agent is Group A streptococcus (GAS), which is responsible for 26% of pharyngitis cases in children. What starts as GAS pharyngitis, might result in immune mediated non-infectious complication called acute rheumatic fever (ARF) which can progress to RHD characterized by permanent damage to heart valves (2).

The disease progression can be stopped by deploying the prevention protocols. Primordial prevention consists of socioeconomic stability and improving infrastructure. In cases of GAS pharyngitis, oral or intramuscular penicillin is prescribed as a primary prevention to ARF episode. To prevent ARF recurrence, secondary prevention protocols are followed. It consists of a 5 -10 year regimen of intramuscular penicillin G injection every 4 weeks (3). If ARF progresses to RHD, tertiary prevention incorporating anticoagulation medications and disease monitoring helps prevent disease progression (4).

Secondary prevention is claimed to be the most cost effective prevention and hypothetically considered efficient for RHD eradication. However, the substandard health infrastructure makes it difficult to comply with the regimen (3). A concerning issue is physicians' lack of knowledge regarding RHD. A study reveals that only 49.5% of cardiologists in a tertiary hospital in Karachi, Pakistan knew about the clinical features and laboratory findings of ARF whereas 22%, 40.5% and 43.5% of physicians had correct knowledge of duration of treatment, relevant drugs and doses respectively (5). At governmental level, there is no advocacy, policy, initiative or budget allocation to counter RHD. With regards to the public, majority of the people live in rural areas, literacy rate is low, housing is substandard and disease awareness is minimal. Employing secondary RHD prevention in low middle income countries has not yielded significant results. However, there are two surprising case studies where introducing primary prevention to the RHD prevention campaign has led to an applaudable decline in ARF incidence. A 10 year programme of ARF prevention was initiated by Cuba and Martinique. The ARF incidence in Cuba decreased from 18.6 per 100,000 to 2.5 per 100,000. Whereas in Martinique, the incidence decreased by 78%. There was 86% reduction in direct costs in both regions (2).

Given the current circumstances, Pakistan requires an analogous and all-encompassing plan for the prevention of RHD. It is necessary to implement awareness campaigns, conduct training seminars, and ensure regular maintenance of the registry. It is recommended to promote the use of a single dose of intramuscular Benzathine penicillin G as the preferred treatment for pharyngitis in order to prevent the condition from occurring in the first place. Furthermore, it is important to promote both secondary and tertiary prophylaxis simultaneously.

Financial support and sponsorship: None

Conflict of interest: None declared.

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Submitted: 21-09-2024
Accepted: 23-09-2024
Published: 28-12-2024

How to cite this article: ------. Rheumatic Heart Disease: Roadblocks and Interventions. Pak J Public Health. 2024 Dec. 28;14(4):235.
Available from: https://pjph.org/pjph/article/view/1509 DOI: https://doi.org/10.32413/pjph.v14i3.1509