Rheumatic Fever/Rheumatic Heart Disease: Major Determinants, Barriers and Constraints. Actions to Overcome Barriers

Porfirio Nordet, MD, DSc

WHO Global Project for Prevention of RF/RHD, Cardiovascular Diseases Programme, World Health Organization, Geneva, Switzerland

INTRODUCTION

Rheumatic Fever/Rheumatic Heart Disease (RF/RHD) is both a biological and a social problem. Its public health importance is not only a direct result of its high occurrence rates (mortality, prevalence and incidence), but also the population affected (children and young adults) and its economic consequences, both in health care related costs and in indirect costs to society (often resulting in premature death or disability).

It is an inflammatory, non-suppurative sequel of group A streptococcal upper respiratory tract infections with a marked tendency to recurrence. Environmental and socio-economic factors linked to low income, poverty, overcrowding, poor housing conditions and inadequate health services have a very important influence in its occurrence and severity.

To date, we can assume a conservative estimate of 12 million people affected by RF/RHD, with more than 2 million requiring repeated hospitalization and 1 million requiring heart surgery in the next 5 to 20 years. There are 400,000 deaths annually, and hundreds of thousands of people disabled, mainly children and young adults, who have no access to the expensive medical and surgical care that RHD demands. (Figure I). It is a major public health problem in most developing countries.

Figure I

MAJOR DETERMINANTS

It is well known that socio-economic and environmental factors affecting the host - agent (Streptococcus) interaction play an indirect, but important role in the magnitude and severity of RF/RHD. These factors remain present in most developing countries (low income, poverty, overcrowding, poor housing conditions and inadequate health services). Health system related determinants also remain, mainly lack of epidemiological information, expertise and training in health provider, low level of health education in the population and in general shortage of resources for health care, particularly, for RF/RHD prevention and control. Although the epidemiology and pathogenesis of RF/RHD are still incomplete, proven methods for safe, feasible and cost-effective prevention and control are available, people need adequate medical and public health approaches (Figure II).

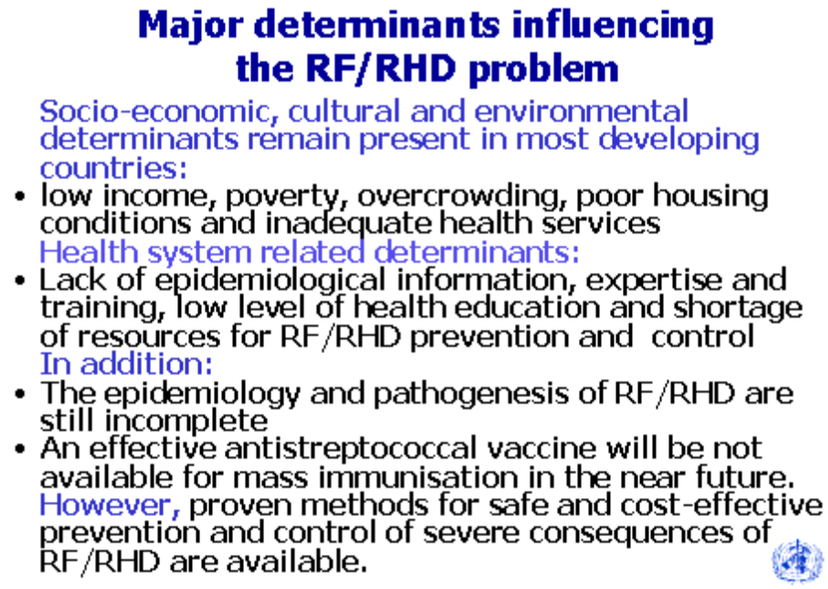

Figure II

Socio-economic implications should be seen in three aspects: the direct cost of medical and surgical care of RF/RHD that diverts the scarce family and societal resources; the indirect cost with loss of production by patients and relatives; and the intangible costs that produce premature death and disability as well as loss of educational opportunities. This has a great repercussion not only on the patient and family, but also on the general community and society of the country, particularly in developing countries (Figure III).

Figure III

CONSTRAINTS

In addition to the shortage of resources in developing countries, there are a group of internal barriers that interfere/hamper in taking action for the prevention and control of RF/RHD, mainly a limited recognition of the magnitude of the problem and of its possible cost-effective solution, education of health professionals is basically curative and primary care professionals are not appropriately trained to deal with the RF/RHD and streptococcal infection problem (Figure IV).

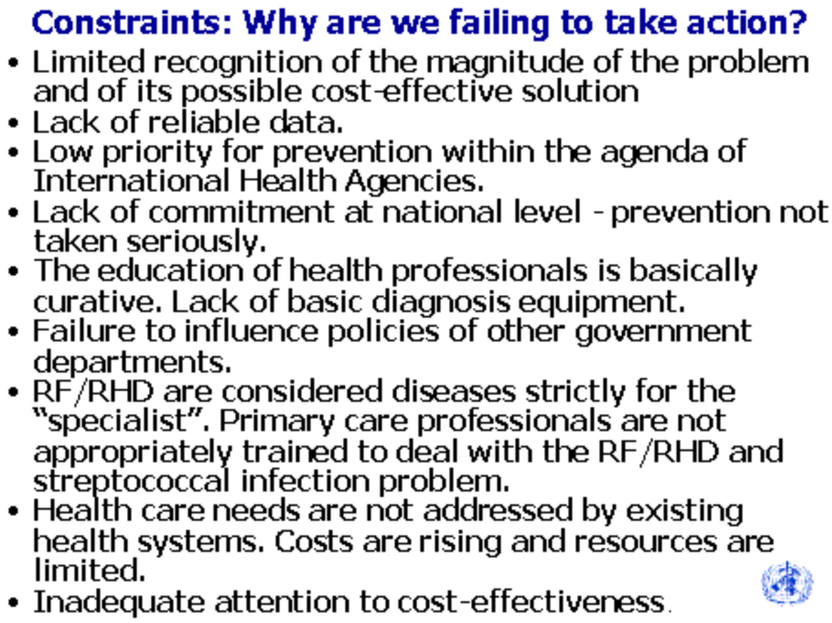

Figure IV

The small outbreaks of RF which occurred in the mid-1980s in middle class people of some cities of the USA and other countries, demonstrated that streptococcal infections and their sequelae cannot be considered as a disease which will disappear only with improved living standards and better access to health facilities. RF/RHD needs major efforts from the scientific community for improving the knowledge of its epidemiology and pathogenesis, and developing an effective antistreptococcal vaccine.

ACTIONS TO OVERCOME BARRIERS

Immense opportunities exist for the prevention and management, as well as for action to control RF/RHD as part of the normal structure of health of each country, at every level, global and regional to country and local communities. Main actions are: to establish at least one local/regional centre implementing RF/RHD prevention strategy, as initial stage for further provincial and nationwide coverage, upgrade the role of primary care and paediatric services in prevention and control of RF/RHD and streptococcal infection, develop feasible surveillance methods to assess the pattern and trends of RF/RHD and develop effective inter-country, interregional and global networks and partnerships. The main goal is a permanent reduction in the occurrence and severity of Group A streptococcal infection and its complications, decrease in the number of acute RF and recurrence attacks, an improvement in case finding and secondary prophylaxis compliance (Figure V).

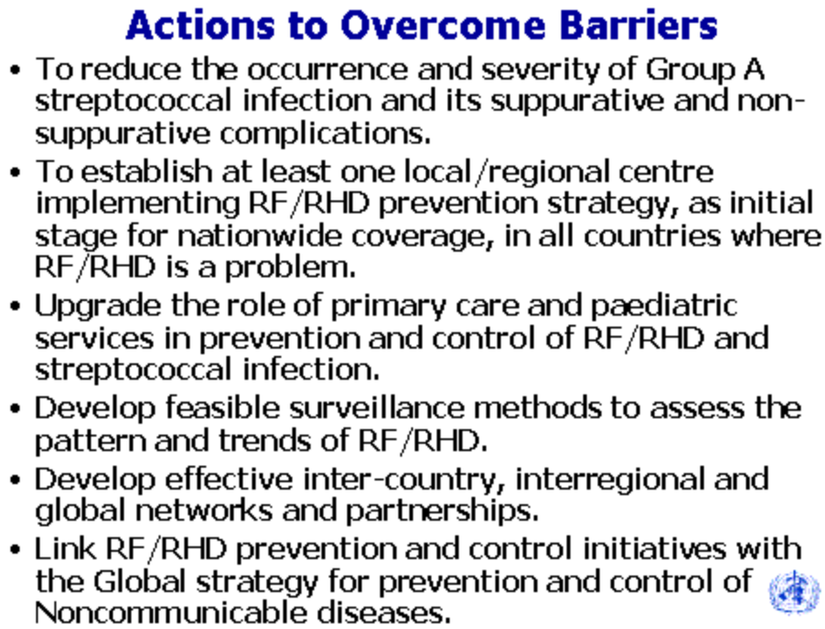

Figure V

The strategy and actions are based on primary and secondary prevention of RF/RHD approaches, with emphasis in personnel training, medical information, health education, community participation, epidemiological surveillance and evaluation (Figure VI).

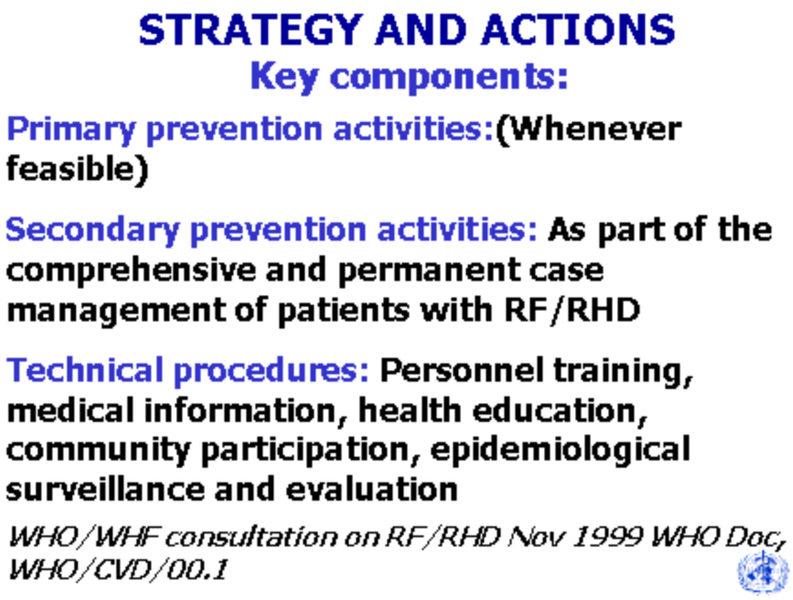

Figure VI

PREVENTION OF SEVERE CONSEQUENCES OF RF/RHD IS ACHIEVABLE AND COST-EFFECTIVE

Indeed, of all serious chronic conditions, rheumatic heart disease is one of the most readily preventable.

Countries need:

- Supportive policy decisions
- Integration of adequate medical and public health approaches
- Health education and school system involvement
- Community participation
- Media involvement

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