Panel Discussion: Rheumatic Heart Disease; Its Significance as a Social Problem*

Moderator

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1. Rheumatic Heart Disease as a Social Problem of Japan

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Recently frequency and severity of rheumatic fever (RF) and rheumatic heart disease (RHD) seem to be decreasing, but there are also data opposed to this impression. In this paper present status of RF and RHD in Japan was discussed with special reference to social problems of those diseases.

1. Mortality Statistics

According to vital statistics in 1968, mortality rate per million population was 0.006 in RF and 0.046 in RHD in Japan. There is a significant annual decrease in death rate in Japan and other countries in the world, accompanied by medical progress and improving social conditions.

2. Patient Surveys

In Japan the Ministry of Health and Welfare has carried out National Patient Surveys on the second Wednesday of July every year, and investigated the number of patients in hospitals and clinics. According to the result number of patients was 6,400 with RF and 6,600 with RHD in 1969. During past 10 years number of patients with both diseases gradually increased, despite downward trend in mortality.

Fig. 1. The prevalence of rheumatic fever and rheumatic heart disease in patient surveys (Japan).

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3. Student Surveys

The Committee on the Prevention of Rheumatic Heart Disease, Japanese Circulation Society, has carried out a nation-wide surveys of heart disease among children of primary and secondary schools in Japan during a 15 year period. The result showed that in 1971 RHD accounted for 0.01 per cent and congenital heart disease (CHD) for 0.24 per cent among 800,000 school children in Japan. The surveys also revealed a significant decline in number of patients with RHD, with a decrease of 95 per cent in 1971 from the figure obtained 11 years earlier, while prevalence of CHD did not vary during the same period, as expected.

Fig. 2. Prevalence of RHD, CHD and RF history among school children in Japan.

According to Student Surveys described above, the frequency of children with a previous history of RF was 0.49 per cent in 1971, with no apparent changes during a 5 year period. Pattern of valvular heart disease seems to be changing. The ratio of mitral insufficiency to all RHD among school children showed marked increase in the last 10 years from 29.0 per cent in 1962 to 75.7 per cent in 1971. The significant decline in mitral stenosis was noted. The changing pattern of valvular heart disease could reflect a diminished severity of preceding RF.

4. Clinical Observation

Total number of patients with RF admitted to hospitals is apparently decreasing

Fig. 3. Changing pattern of clinical manifestations of rheumatic fever in Japan.

more commonly admitted than those without carditis.

5. Environmental Factors

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There are a lot of contributing factors to the occurrence of RF. In this study mortality rate of RF and RHD in every prefecture of Japan reported in Vital Statistics was compared with socio-economic factors of each prefecture. There was a significant correlation between high mortality rate of RHD and low food expense or consumption of meat, milk and egg. Our study in Tokyo Metropolis revealed that occurrence of carditis and residual valvular disease following RF was much higher in rural and hill district than residence and industrial regions, while incidence of RF was almost similar in every area. The less availability of medical facilities in rural area is most likely to influence severity and poor prognosis of RF in Tokyo.

6. Streptococcal Infection

Our studies among school children of Fuchu City in Tokyo Metropolis indicated that positive throat cultures for group A streptococci was found in 15.2, 19.2 and 19.9 per cent in 1969, 70 and 71 respectively. Among the same group 0.01 per cent of students were suffering from RHD. The discrepancy between high rate of streptococcal carriers and low incidence of patients with RHD could be explained by the fact that in this country antibiotics are easily available and prescribed by physicians for infected individuals promptly.

Much higher proportion of school children have been found to harbor group A streptococci in some islands of Ryukyu, where medical facilities, pharmacies and antibiotics are hardly available. In Koza City of Okinawa Island the figure was 53.2 per cent of school children in 1971, while incidence of RHD among the same group was 0.18 per cent, which was 18 fold of that observed in Tokyo Metropolis.

Summary and Conclusion

It is clear that death rate from RF and RHD has been declining steadily in Japan, but, according to nation-wide Patient Surveys, incidence of patients with RF and RHD is not decreasing. Since there is a decrease in the number of children with RHD, RF and residual RHD could occur more commonly after school age recently. There was no evidence to suggest that any fundamental change has occurred in the clinical pattern of RF in Japan. However, probably due to early administration of antibiotics to RF patients, the clinical picture of the disorder is becoming milder, remaining less severe valvular disease.

Despite these encouraging pictures, RF is far from disappeared. It should be remembered that outbreaks of scarlet fever are common in Japan with various prevalence by year, which is also a form of streptococcal infection. There is a spread of group A streptococci in the throat of school children in this country. Any fundamental change in the toxicity of the organism could occur. Thus, possibility of epidemic outbreaks of streptococci remains, followed by RF and RHD. These studies indicate that RF and RHD remain an important public health problem in this country.

Reference

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