

Frequency of Rheumatic Fever in Ankara*

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During the recent decades the epidemiology of rheumatic fever (RF) has undergone significant changes in economically developed countries, such as in the USA. Rheumatic heart disease (RHD) appears less prevalent among school children and young adults than it was a few decades ago. This decline may be due to changes in either the incidence or severity of RF or both.

Our observations in Hacettepe Children's Hospital for the last 20 years suggest that RF is still an important problem in Turkey. Among 939 cases of RF examined in our institution, in 1976, 284 were new cases. 110 cases of active rheumatic carditis were admitted to Hacettepe Children's Hospital in the same year. 263 patients, under 15 years of age, underwent cardiac surgery for rheumatic valvular disease, in the same hospital, during the last 8 years. These are examples indicating that RF is a serious problem in Turkey.

It is difficult to determine the incidence of RF accurately. At the same time no single source of data can provide an accurate picture of the extent of RF.

The purpose of this article is to summarize some studies done in Ankara on the frequency of RF.

Table I reflects the results of our unpublished study on the frequency of RF in a rural area where public health program has been applied for 40 years. We have to emphasize that the medical care has been excellent in this rural pilot area. The incidence of RF is about 20 per 100,000. Statistically there is no significant difference in the incidence of RF during the last five years.

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TABLE I
INCIDENCE OF RHEUMATIC FEVER IN "ETIMESGUT"

Years	First attack of RF			Population	Incidence (per 100.000)
	Total	Male	Female		
1972	12	8	4	63.907	18
1973	14	6	8	65.218	21
1974	11	6	5	68.072	16
1975	12	4	8	69.203	17
1976	14	6	8	70.305	20
	(p > 0.05)				

The number of satisfactory studies on the incidence of RF in the medical literature is limited. Quinn et al.¹ studied the incidence of RF in Nashville, Tennessee (USA) from 1963 to 1965. The incidence was found to be 12.6 per 100,000 population. Gordis et al.² estimated the incidence of RF in Baltimore (USA) from 1960 to 1964 as 24 per 100,000 for initial attacks. Our figures show that the incidence of RF in that part of rural Ankara is as low as that in developed countries. This is most likely because of the good medical care given in this pilot area. However, the overall incidence of RF in Turkey is probably very high.

We would like to review some studies on the prevalence of RHD done in Ankara. In a field study in Sincan, 9389 cases were examined about 10 years ago. There were 51 cases with RHD and the prevalence of RHD was 5.4 per 1.000 (Table II)³.

TABLE II
PREVALENCE OF RHD IN "SINCAN"

RHD	Population	Rate per 1.000
51	9.389	5.4

In a school survey in city done by us the prevalence of RF was found to be 2 per 1.000. The socioeconomic level of children was high and the age range was 6-12 years. Another study on school children was done in Ankara in 1975 by Dr. Imamoglu (Table III).⁴ In this study 2 schools were selected. One with a low and the other with a high socioeconomic level. The number of students examined was 1590 in the first group, 1449 in the second. The prevalence of RHD in the first group was 10.7 and in the second 2.1. This indicates that the prevalence of RHD is high among school children from low socioeconomic levels. Statistically there is significant difference between the two groups. If one tries to estimate

the prevalence of RHD among school children in Turkey from this survey, he should know that great majority of the population comes from low socioeconomic groups. Therefore the true incidence should be closer to the high figures.

TABLE III
SCHOOL SURVEY IN THE CITY (ANKARA 1975)

	Students	RHD	Rate per 1,000
Low socioeconomic	1590	17	10.7
High socioeconomic	1449	3	2.1
	($p < 0.01$)		

(From A. Imamoglu)

Table IV shows the prevalence rates of RHD in different surveys in the literature.5-13 According to the studies done in New York the prevalence of RHD has shown significant changes between 1920 and 1961. In Soweto (South Africa) the prevalence was found to be 7.1 in 1972.

TABLE IV
PREVALENCE OF RHEUMATIC HEART DISEASE

Place of survey	Year	Age Range (Years)	Rate per 1,000	Ref.
New York City	1920	6-17	4.3	Halsey/1921
Philadelphia	1934	6-18	5.0	Chana/1937
New York City	1961	5-18	1.6	Brownel/1963
Denver	1963	5-18	1.7	Morton/1967
San Louis Valley	1965	6-18	3.7	Morton/1970
Japan	1966	6-17	3.8	Shiokawa/1969
Northern India	1966-1970	0-20	1.4	Berry/1972
Teheran	1969-1970	4-15	22.	Gharagozloo/1972
Soweto	1972	6-18	7.1	McLaren/1975

Since they do not have statistical value we will not mention about the studies we have done in different cities of Turkey, such as Erzurum, Diyarbakir, Kayseri, and Samsun. However, with the data we collected one may speculate that the prevalence of RHD is high in Turkey. Further studies on the incidence of RF and prevalence of RHD are necessary.

Summary

During the recent decades the epidemiology of rheumatic fever has undergone significant changes in economically developed countries. Our observations in Hacettepe Children's Hospital for the last 20 years suggest that rheumatic fever is still an important problem in Turkey. It is difficult to determine the incidence of rheumatic fever accurately. In our study in Etimesgut area, where public health program has been applied for 40 years the incidence of rheumatic fever was found to be 20 per 100,000. The prevalence of rheumatic heart disease among school children of high socioeconomic levels is 2 per 1000.

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