PREVALENCE OF OCULAR INVOLVEMENT IN LEPROSY IN EASTERN UTTAR PRADESH

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A survey of 995 cases of leprosy revealed the prevalence of ocular involvement to be 275.4 per thousand. Lepromatous leprosy showed the highest prevalence. Majority of the cases were males, but prevalence of ocular involvement was higher in females. The 40-50 year age group showed the maximum prevalence. The time interval between the onset of skin lesions and the eye lesions, in majority of the cases, was 5-10 years.

Key words : Prevalence, Ocular involvement, Leprosy.

When leprosy involves the eyes, it often cases blindness. Ocular involvement in leprosy is more frequent with the advancing of age and duration of the disease.[1]

Materials and Methods

A survey of leprosy patients was done at the leprosy department of Medical College Gorakhpur, Kusht Ashram Gorakhpur, Leprosy centres and by field surveys in Gorakhpur, Basti, Deoria and Azamgarh districts of eastern Uttar Pradesh. The survey was conducted between October 1981 and August 1982. Leprosy was diagnosed on the basis of clinical and laboratory investigations including slit smear and nasal smear examinations and a skin biopsy. A complete ocular examination with tonometry and measurement of the visual acuity and fundus examination was done at each centre. The type of leprosy, its duration, age, sex and the time interval between the onset of skin lesions and eye lesions were recorded.

Results

A total of 995 leprosy patients were observed from various sources. The over all prevalence of ocular involvement was 275.4 per thousand. The maximum (365) number of leprosy cases were from the leprosy department of Medical College, but the maximum prevalence rate (451.8 per thousand) of ocular involvement was observed in the cases taken from the Kusht Ashram (Table I). The lepromatous leprosy showed the maximum (553.7 per thousand) prevalence of ocular involvement (Table II). Prevalence of ocular involvement in the males was 257.5 per thousand compared to 350.8 per thousand in females. According to the age group, the prevalence of ocular involvement was maximum (380.7 per thousand) in the 40-50 years age group. The prevalence of onset of eye lesions was much higher after twenty years of the disease (Table III).

Table I. Source-wise distribution of pevalence rates of ocular involvement in leprosy patients.

Source	Number of cases having		
	Leprosy	Ocular involvement	Prevalence rate per thousand
Leprosy deptt Medical College	365	70	191.8
Kusht Ashram	270	122	451.8
Leprosy centres	100	22	220.0
Field surveys	260	60	230.8
Total	995	274	275.4

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Table II. Ocular involvement in different types of leprosy.

Type of leprosy	Number of cases having		Prevalence rate per thousand
	Leprosy	Ocular involvement	
1. Lepromatous	242	134	553.7
2. Borderline	160	70	437.5
3. Tuberculoid	138	42	304.4
4. Polyneuritic	145	14	96.6
5. Maculo-anaesthetic	310	14	45.2
Total	995	274	275.4

Table III. Time interval between the onset of skin lesions and eye lesions.

Time interval in years	Number of cases having		Prevalence rate per thousand
	Leprosy	Eye involvement	
<1	376	8	21.3
1-5	292	67	229.5
5-10	218	114	568.8
10-15	51	41	803.9
15-20	37	26	702.7
>20	21	18	857.1
Total	995	274	275.4

Comments

The prevalence of ocular involvement in eastern Uttar Pradesh is 275.4 per thousand. The over-all prevalence of leprosy in Gorakhpur and its neighbouring area is 6.3 per thousand.[3] The ocular involvement in various other studies from different parts of India has been reported to be 5.87%,[2] 11%,[4] 24.65%,[5] 26.9%,[6] 70%,[7] and 80%.[8] In other parts of the world also, a varying prevalence has been reported, 6.3%[9] in Africa, 47%[10] in Ceylon, 52%[11] in New Guinea and 74.2%[12] in Nepal. Somerset and Dharmendra[13] in 1978 reported that about 25% of leprosy cases ultimately show involvement of the eye.

In the present study, lepromatous type of leprosy shows the maximum (553.7 per thousand) prevalence of ocular involvement followed by borderline and tuberculoid types of leprosy. This finding is consistent with other workers.[2,5,6,14] But the prevalence of ocular involvement is observed to be higher in females than males. It is statistically significant. Ocular lesions are also more frequent with increasing age.[1]

The time interval between the onset of skin lesions and eye lesions is variable with various workers. In the present study, the maximum (114 cases) patients had eye lesions within 5-10 years after the onset of skin lesions. The prevalence of ocular involvement greatly increased with the duration of skin lesions and it was highest (857.1 per thousand) 20 years after the onset of skin lesions. Sehgal et al[5] observed a large number of patients with ocular changes within two years of disease. While in other series[2,10] maximum cases were seen within 6-10 years after the onset of skin lesions. Thus, the chances of developing eye lesions are higher 5-10 years after the onset of the skin lesions.

Acknowlegement

This project was supported by the Indian Council of Medical Research, New Delhi.

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