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MYCOBACTERIUM LEPRAE IN SKIN AND NASAL SCRAPINGS
DURING SULFONE TREATMENT

A REVIEW OF 146 CASES

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Leprologists are generally agreed that the sulfone drugs are the treatment of choice in leprosy today. Clinical improvement in the majority of treated patients is reported by all observers. There is less agreement, however, on such questions as the bacteriologic changes occurring during treatment, the end result of long-continued treatment, and the relapse rate.

In a survey of 4,072 cases, Dharmendra and Sen (1) reported the finding of *M. leprae* in nasal scrapings in 92 per cent of lepromatous cases and 0.17 per cent of tuberculoid cases. It was the original purpose of the present study to collect data on nasal scrapings taken during sulfone treatment. Cases chosen included those in which bacilli were found by nasal scraping on admission, which had received sulfone therapy for at least six months, and for which there was a record of nasal scrapings taken at least twice annually during the period of observation. Scrapings are generally not made more frequently, to avoid undue trauma of the infected nasal mucosa.

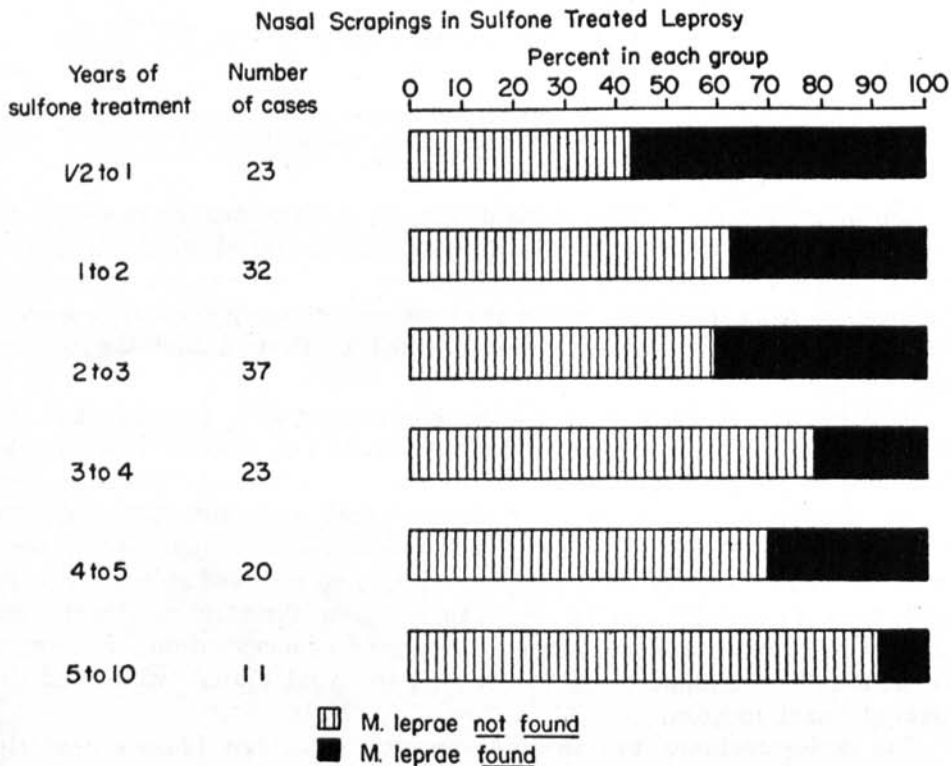
The series includes 146 cases of leprosy, of which 144 were of the lepromatous type and 2 were diagnosed as reactional tuberculoid. All of the patients remained hospitalized during the entire period of treatment and study.

The subject of nasal scrapings was chosen for study for two reasons: (1) From a public health point of view it had long been believed that the infected and often ulcerated nasal mucosa, with relatively free discharge of bacilli, might serve as a better source of infection than most skin lesions, in which organisms are bound within the tissues unless lepromatous ulceration occurs. (2) Casual observation over the years had suggested that, with treatment, the nasal mucosa may be apparently freed of *M. leprae* at a much earlier date than are the involved skin areas.

The trend of the results in the nasal scrapings during sulfone therapy of the cases studied is shown graphically in Text-fig. 1. It is apparent that bacilli were not found in the majority of cases after a year or more of sulfone treatment. It has not been shown that continued treatment for a period of several years will free the nasal mucosa of organisms in all cases.

In the same series, the duration of sulfone treatment has also been correlated with the number of apparent arrests. The findings are shown

in Text-fig. 2. Apparent arrest is defined here as absence of clinical activity and failure to find *M. leprae* in routine skin scrapings in twelve monthly examinations. A final detailed examination of each patient is



TEXT-FIG. 1. Positivity of nasal scrapings in sulfone-treated patients, by time of treatment. Solid portions of bars, bacilli found; open portions, bacilli not found.

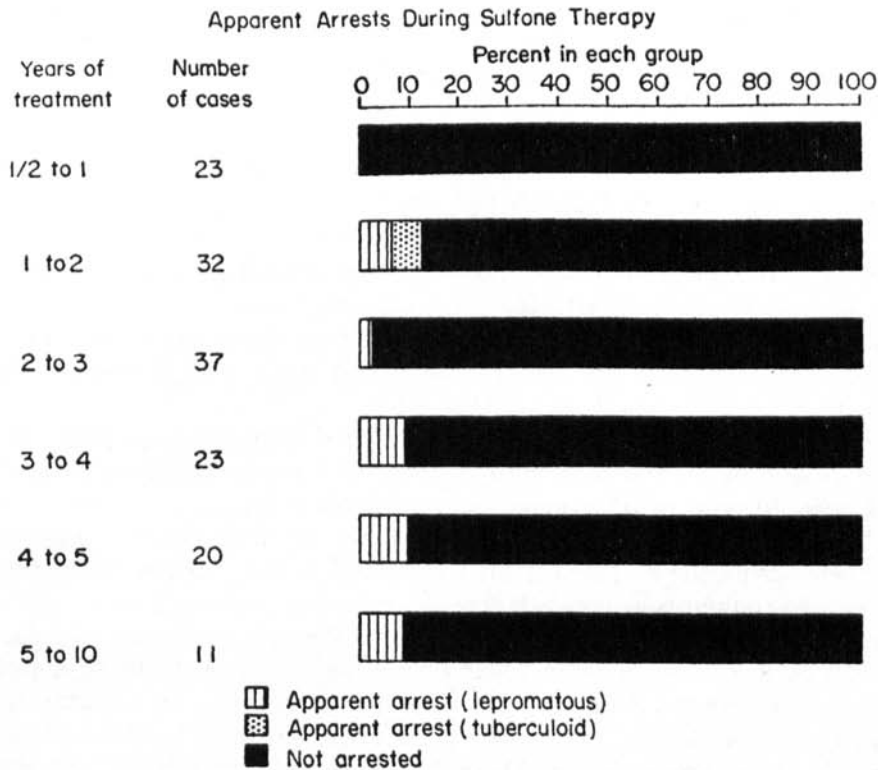
made by a board of medical officers who check for any suggestion of disease activity and make skin and nasal scrapings as indicated before classifying the disease process as apparently arrested. The two tubercloid cases included in the series became apparently arrested, and represent one-half of the arrested cases in the one to two year group. In the entire group of 146 cases there were ten instances of apparent arrest during the period of observation.

SUMMARY

The results of skin and nasal scrapings are recorded in 146 cases of leprosy during periods of sulfone therapy ranging from six to ten years:

1. The nasal mucosa is apparently freed of *M. leprae* in more than 50 per cent of cases within one year of sulfone treatment.

2. The skin is apparently freed of *M. leprae*, as shown by routine skin scrapings, in less than 10 per cent of cases in from one to ten years of sulfone treatment.



TEXT-FIG. 2. Apparent arrests (i.e., negativity of skin lesions) of sulfone-treated patients, by time of treatment. Solid portions of bars, bacteriologically positive; open portions, bacteriologically negative; dotted portion (1-to-2-year bar), reactional tuberculoid cases become negative.

RESÚMEN

Se informan los resultados de frotis nasales y cutáneos en 146 casos de lepra durante períodos de 6 a 10 años bajo terapia con sulfones;

1. La mucosa nasal se libra de *M. leprae* en más del 50% de los casos en menos de 1 año de tratamiento con sulfonas.

2. Las lesiones cutáneas aparentemente se libran de *M. leprae*, según demuestran los frotis rutinarios, en menos del 10% de los casos, entre 1 y 10 años bajo tratamiento con sulfonas.

REFERENCE

1. DHARMENDRA and SEN, N. Frequency of the presence of leprosy bacilli in nasal smears of leprosy patients. *Leprosy in India* **20** (1948) 180-184.