Leprosy - family screening

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Abstract:
Early detection and treatment of new cases are essential to control leprosy and prevent deformities. The aim of the study was to identify new cases and possible sources of infection by screening household contacts. 323 house hold contacts of 194 index patients with leprosy were screened. Skin biopsy and slit skin smear examination were done when necessary. Thirteen (37) new cases were found over a period of 6 months. Four had lepromatous leprosy. Ten (10) had tuberculoid leprosy and 9 had indeterminate type. Unilateral thickening of greater auricular nerve was the only feature found in 14 patients. Possible source of infection was detected in only 4 families.

This study emphasizes the importance of family screening to detect new cases and the need to extend contact tracing beyond the family to identify the source of infection.

Introduction:
Leprosy is transmitted by droplets from an infectious patient. Age, sex, household contacts and previous BCG vaccination are important determinants of leprosy risk.[1] Close contact is one of the major factors affecting leprosy transmission.[2] Screening of household contacts helps to detect new cases.

Since the incubation period is long in leprosy not only the current contacts but also the past contacts should be considered.

New cases and possible sources of infection can be detected by screening. Since screening the whole population is not cost effective, selecting the household, neighbourhood and workplace contacts is an option.

Objectives:
Main objectives of the study were to detect new cases and to identify the sources of infection by screening household contacts.

Method:
The study was conducted at the skin clinic of Teaching Hospital Colombo South over a period of 6 months from June 2010. Household contacts of leprosy patients who came to the clinic during this period were screened to improve the compliance of the contacts. They were allowed to come for screening on any working day which was convenient for them. In addition a special clinic was conducted on Saturdays to minimize school and work losses.

All contacts were examined for signs of leprosy. Skin biopsy and slit skin smear examinations were done when necessary. All the participants were educated on self examination.

Results:
194 patients came to the clinic during this period. Out of them 154 (79.3 %) brought their household contacts. There were 323 contacts. 37 new cases were detected. 10 had tuberculoid leprosy. 4 had lepromatous leprosy and 9 had indeterminate leprosy. There were 14 patients with thickened greater auricular nerves, however they had no cutaneous features of leprosy. Four (4) possible sources of infection within the families were identified and 5 patients gave

a history of contact with a possible source outside the household. 14 patients had at least one family member who was on or had completed treatment.

25 out of 37 newly diagnosed patients were not aware of their lesions. Four (4) of the remaining had been misdiagnosed by doctors. Out of the contacts 75%did not know the features of leprosy.

We could identify several reasons for poor compliance towards family screening. Ignorance, financial difficulties (travel expenses) and physical disabilities were the main reasons. 10 index patients did not bring the contacts because they wanted to hide the diagnosis from the family due to social stigma.

Conclusion:
This study shows the importance of screening household contacts to detect new cases early. However, we could detect only 4 possible sources. This emphasizes the necessity of extending the screening of contacts outside the home. Physically disabled contacts should be examined at their homes. Health education on self examination and measures to correct social stigmata are important. Financial support towards travel expenses could also improve compliance.

References:

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