PREVALENCE OF SCABIES AMONG SCHOOL CHILDREN IN A RURAL BLOCK OF COASTAL KARNATAKA

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A survey for scabies was conducted in 14 primary and 2 high schools of one rural block of Dakshina Kannada district on the west coast of Karnataka from November 1982 to March 1983. A total of 5,128 (84.9%) out of the 6,041 registered children were examined. Prevalence of scabies among children aged 6 to 15 years was 8.2%; prevalence was higher among boys than girls; higher among children of backward communities than those of other communities; and higer among Muslims than among Hindus. History of another case of scabies at home was found in 37.3% of the cases. Secondary pyoderma was observed in 16.5% of the cases. Distribution of lesions conformed to the pattern described in other studies. Results of follow-up after 3-5 weeks of treatment with 25% benzyl benzoate are also reported.

Key words : Prevalence, Scabies, School survey.

Prevalence of skin diseases among school children in India has been reported to vary from 6.6 to 35.1%[1-4] and scabies constituted the most common of all the skin diseases. Orkin[5] reported that there was a progressive increase in scabies in many parts of the world since 1963. Present study was conducted with the objectives of, (i) estimating the prevalence of scabies; and(ii) defining some clinical features.

Materials and Methods

The present study was conducted in Moodabidri block of Karkal taluk in Dakshina Kannada district of Karnataka state, from November 1982 to March 1983. This block is the field practice area of the Department of Community Medicine, Kasturba Medical College, Mangalore where Re-orientation of Medical Education (ROME) programme is in operation. The climate is hot and humid throughout the year, with the temperature ranging from 26 to 31°C and humidity ranging from 70 to 90%. A set of five villages were chosen for the delivery of health care through a mobile clinic under the ROME programme. For the purpose of this study, children between the ages of 6 and 15 years studying in primary and high schools were chosen. These schools were situated either in the head-quarters village, or in the villages selected for ROME programme or on the way to ROME villages. In all, 14 (21.9%) out of 64 primary schools and 2(33.3%) out of 6 high schools existing in the block area were selected. Schools selected were visited by a team of doctors which consisted of at least one of the authors and 2-3 medical interns. Students were screened class-wise with the help of the class teachers. As far as possible, only lady interns examined the female children. A pre-designed and pre-tested proforma was used to collect the information. The diagnosed cases and their home contacts if any, were each given 100 ml of 25% benzyl benzoate with the necessary instructions. Each school was visited again after 3-5 weeks to study the out-come of the treatment. The patients who were not cured and new cases, if found, were given a similar course of benzyl benzoate.

Results

In all, 6,041 students were enrolled for the

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year 1982-83 of which, 5,123 (84.9%) were examined; only the students in the latter category were taken as the population for the study. Of these, 56.2% were boys and 43.8% girls; 71.2% were Hindus, 6.1% Christians, 12.8% Muslims and 9.9% belonged to the backward communities.

A total of 418 students were found to have scabies. Of these, 275 (9.5%) were boys and 143 (6.4%) were girls. Their distribution according to their age groups 6-9 years, 10-12 years and 13-15 years was 9.4%, 11.0% and 3.2% for boys and 8.3%, 6.5% and nil for girls respectively. The overall prevalence among the boys was significantly more than that among the girls ($X^2=17.0498$, $P<0.001$). The prevalence decreased as the age advanced. Religion-wise distribution of the cases was highest among students of the backward communities (15.3%) and it was significantly more than that among the Muslims (10.5%), Hindus (7.1%) and Christians (3.8%). Similarly, the high prevalence among Muslims was statistically significant when compared with that of Hindus and Christians. History of another case of scabies at home recorded was present in 37.3%; it was highest (56.4%) among students of backward communities compared to the Hindus (33.6%), Christians (33.3%) and Muslims (30.4%). Distribution of the lesions revealed that finger webs (93.5%), wrists and forearms (69.6%) and abdomen, pubis and external genitalia (30.4%) were the common sites. Secondary pyoderma was observed among 69 (16.5%) cases. Follow-up of 357 cases after treatment revealed that 298 (83.5%) had applied benzyl benzoate and were cured of the lesions; 18 (5.0%) had applied but were not cured, and 41 (11.5%) had not applied the medicine and were not cured.

Comments

An epidemiological study of a communicable disease, especially if it causes long periods of morbidity, but it is easily amenable toa short and thorough local treatment, as in the case of scabies, can help in suggesting measures to intercept its spread in the community. School surveys are valuable for more than one reason, because a large vulnerable population can be screened at one point of time and place; treatment and follow-up are easy; and the message can be spread through this group to control the disease in the rest of the community.

Prevalence rates of scabies have been reported to be 6% in Kerala[6], 16.6% in coastal Tanzania[7] and 4% in Gujarat[8] compared to 8.2% in the present study.

Favourable factors for the spread of the disease as reported in other studies[6-9] have been lower socio-economic status, poor personal hygiene, poor home sanitary conditions and overcrowding in homes, of which the last factor was the most determining factor as observed by Desai and Nair.[9] In the present study also, similar factors in living conditions seem to be responsible for the differences in the prevalence among students of different religions and backward communities. Moreover, overcrowding in the class rooms of the schools may be equally important. Most of the schools under the present study accommodated 40-60 students in rooms with floor area of 10-15 sq. m. Backward communities defined in this study included scheduled castes and scheduled tribes. They are the lowest in the echelon of Hindu caste system. Most of them have low income and poor home sanitary conditions; highest prevalence (15.3%) may highlight the role of such factors.

Secondary pyoderma has been reported to be 57% among children by Desai and Nair,[9] 33.3% by Gulati and Singh[10] and 28% by Bhavsar and Mehta,[8] compared to 16.5% in the present study.

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