Abstract

A study of tinea capitis was carried out during the period Jan. - June 1996 in 7,525 primary school children aged 6-14 years and comprising 4,050 males and 3,475 females in the Nablus District in the Palestinian Area. Fourteen primary schools located in rural, urban, and refugee camps areas were surveyed in this study. Seventy-five (1.0%) mycologically proven cases of tinea capitis were detected. Incidence was higher in schools in rural areas (1.9 %) than in refugee camps (1.1 %) or urban areas (0.4 %). Also incidence was higher in young children (1.4 %) aged 6-10 years than in elder children (0.5 %) aged 10-14 years. In the infected cases, males 52 (1.3 %) were more commonly affected than females 23 (0.7 %). Higher disease incidence was found to be correlated with larger family and class sizes. *Trichophyton violaceum* was the most common etiological agent (82.7 %) followed by *Microsporum canis* (16 %) and *T. schoenleinii* (1.3 %). The findings were discussed in relation to children's different socioeconomic and hygienic backgrounds. A mycological investigation carried out on 117 tinea capitis cases at a clinic in the area under study showed comparable results to those of the school survey.

Through literature review and surveys 47 plants have been found to be used in folkloric medicine in Palestine for the treatment of skin diseases suggestive of dermatophyte infection. The aqueous extracts (15 µg/ml medium) of twenty-two of these plants were investigated for their antifungal activity and MIC values, using the agar plate method, against nine isolates of *Microsporum canis, Trichophyton mentagrophytes*, and *T. violaceum* isolated from school children infected with tinea capitis. The extract of the different plant species reduced colony growth of the three dermatophytes by 36 % to 100 % compared with the control treatment. Antimycotic activity of the extract against the three dermatophytes varied

significantly ($p < 0.05$) between test plants. Extracts of *Capparis spinosa* and *Juglans regia* completely prevented growth of *M. canis* and *T. violaceum*. The most active extracts (90 - 100 % inhibition) were those of *Anagallis arvensis, C. spinosa, J. regia, Pistacia lentiscus* and *Ruta chalapensis* against *M. canis; Inula viscosa, J. regia* and *Pistacia lentiscus* against *T. mentagrophytes*; and *Asphodelin lutea, A. arvensis, C. spinosa, Clematis cirrhosa, I. viscosa, J. regia, P. lentiscus, Plumbago europea, Ruscus aculeatus, Retema raetam* and *Salvia fruticosa* against *T. violaceum*. The MIC values of these most active plants ranged from 0.6 – 40 µg/ml. The three dermatophytes differed significantly with regard to their susceptibility to plant extracts with *T. violaceum* was the most susceptible being completely inhibited by 50 % of the extracts followed by *M. canis* and *T. mentagrophytes* which were completely inhibited by only 23 % and 14 % of the extracts respectively.