

Clinicomycological Pattern of Superficial Fungal Infections among Primary School Children in Communities in Enugu, Nigeria

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Abstract : Superficial fungal infections (SFIs) are one of the common cutaneous infections that affect children worldwide. They may lead to school absenteeism or school drop-out and hence setback in the education of the child. Community-based studies in any locality are good reflections of the health conditions within that area. There is a dearth of information in the literature about SFI among primary school children in Enugu. This study aimed to determine the clinicomycological pattern of SFIs among primary school children in rural and urban communities in Enugu. This was a comparative descriptive cross-sectional study among primary school children in Awgu (rural) and Enugu North (urban) Local Government Areas (LGAs). Subjects' selection was made over 6 months using a multi-stage sampling method. Information such as age, sex, parental education, and occupation were collected using questionnaires. Socioeconomic classes of the children were determined using the classification proposed by Oyedeji et al. The samples were collected from subjects with SFIs. Potassium hydroxide tests were done on the samples. The samples that tested positive were cultured for SFI by inoculating onto Sabouraud's dextrose chloramphenicol actidione agar. The characteristics of the isolates were identified according to their morphological features using Mycology Online, Atlas 2000, and Mycology Review 2003. Equal numbers of children were recruited from the two LGAs. A total of 1662 pupils were studied. The mean ages of the study subjects were 9.03 ± 2.10 years in rural and 10.46 ± 2.33 years in urban communities. The male to female ratio was 1.6:1 in rural and 1:1.1 in urban communities. The personal hygiene of the children was significantly related to the presence of SFIs. The overall prevalence of SFIs among the study participants was 45%. In the rural, the prevalence was 29.6%, and in the urban prevalence was 60.4%. The types of SFIs were tinea capitis (the commonest), tinea corporis, pityriasis Versicolor, tinea unguium, and tinea manuum with prevalence rates lower in rural than urban communities. The clinical patterns were gray patch and black dot type of non-inflammatory tinea capitis, kerion, tinea corporis with trunk and limb distributions, and pityriasis Versicolor with face, trunk and limb distributions. Gray patch was the most frequent pattern of SFI seen in rural and urban communities. Black dot type was more frequent in rural than urban communities. SFIs were frequent among children aged 5 to 8 years in rural and 9 to 12 years in urban communities. SFIs were commoner in males in the rural, whereas female dominance was observed in the urban. SFIs were more in children from low social class and those with poor hygiene. Trichophyton tonsurans and Trichophyton soudanese were the common mycological isolates in rural and urban communities, respectively. In conclusion, SFIs were less prevalent in rural than in urban communities. Trichophyton species were the most common fungal isolates in the communities. Health education of mothers and their children on SFI and good personal hygiene will reduce the incidence of SFIs.

Keywords : clinicomycological pattern, communities, primary school children, superficial fungal infections

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