Scalp Infection by Miscrosporum nanum

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Abstract

During a three years survey on the prevailing types of Dermatomycoses in Karachi, a case of tinea capitis caused by Microsporum nanum was discovered. This is the first report of scalp infection by this particular species of Dermatophytes from Pakistan. Reports of human infections by Microsporum nanum are rare. Such cases have been encountered in Australia, Brazil, Canada, India, Mexico, New. zealand, Romania and United States. Since human infection by Microsporum nanum has not yet been reported from Pakistan, discovery of first such infection was considered noteworthy (JPMA 33 ; 235, 1983).

Case Report

A ten years old school boy reported to the. outpatients department of Jinnah Postgraduate Medical Centre, Karachi, with a scaly eruption of his scalp for the last six months. This comprised of itchy circular patches with spreading margins. Rest of his skin and nails were normal. Hair were lusterless, swollen and broken.

The patient was prescribed an antifungal cream (clotrimazole) for topical use and was instructed to visit the out-patient department for four successive weeks. Every week the hair filaments and scales from scalp were obtained and examined microscopically and cultured. The lesion went on fading with the local application of the anti-fungal cream and in four weeks the hair-filaments were found negative for fungus by microscopy and culture. The patient was kept under review for further four weeks but there was no recurrence.

Laboratory Findings

Hair filaments and skin scrapings were collected from the lesion after cleaning with 70% alcohol. The specimens were examined microscopically in 15% KOH solution. Septate mycelial filaments were found in the scrapings and around the hair filaments.

Mycology

Skin scrapings and hair filaments were inoculated on the slanted surface of mycobiotic agar (Georg, 1953). The inoculated tubes were incubated at 29°C and observed daily. After few days, the growth appeared as a white colony., which later on became powdery and buff coloured. The reverse of the colony became reddish brown.

Microscopic study revealed the presence of numerous small, pear shaped, two celled, thin walled macroconidia. Few pyriform mic. roconidia arranged singly along the hyphae were also observed. On the basis of colonial characteristics and microscopic morphology the isolate was identified as Microsporum nanum.

Discussion

Microsporurn nanum is a highly interesting dermatophytic fungus in that it is the most common cause of ringworm infection among. pigs (Connole and Beynes, 1966). It has also been reported to cause infection in mice and rabbits (Refai et al., 1970), dogs (Gupta et aL, 1968) and cattle (Sandino Alfaro, 1971; Smith and Steffert, 1966; Smith et al., 1969). Basically it is a geophilic fungus (Ajello et al.,

1964).
Human infection with this fungus is rare (Agello et al., 1964). Only eight cases had been reported till then. The scalp infection resembles that caused by Microsporumgypsicum. Akerion type reaction may result. Hair infection of endothrin type has been described. Some but not all cases give fluorescence when examined with Wood's light. Most of the patients live in rural areas where pigs are kept. Our study did not show any kerion-like eruption.
Morganti et al. (1976) has reported ninteen cases of human infection by Microsporum nanum. In most of these cases the patients gave a history of contact with pigs. In our case the infection may have been acquired from rabbits kept as pets. Unfortunately the patient did not allow examination of his rabbits. Cases of human infection by this species of dermatophyte have been reported from United States (Ajello et al., 1964; Brock, 1961); Mexico (Beirana and Magana, 1960), Canada (Carmichael and Reid, 1962), flrazil, (Londero and Benevenga, 1972), Australia (O'Keeffe, 1973), Newzealand(Baxter, 1969), Italy (Sberna and Gardenghi, 1973), Romania (Altears, 1970) and Cuba. In Asia only a single case of Microsporum nanum infection was reported from India (Grog and Mulay, 1972). Discovery of first such infection from Pakistan is, therefore, noteworthy.

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