TRICHOPHYTÓN VIOLACEUM: A RARE ISOLATE IN 18-DAY-OLD NEONATE

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Abstract

*Trichophyton violaceum*, a less common and geographically restricted infection is reported in a 18-day-old neonate. The diagnosis was made by potassium hydroxide of skin scraping examination and confirmed by culture. The patient was treated successfully with miconazole nitrate application. A large family with crowded living was considered the main predisposing factor.

Key words: *Trichophyton violaceum*, *tinea corporis*

Dermatophytosis (tinea or ring worm) of the scalp, glabrous skin and nails is caused by closely related dermatophytes, which have the ability to utilize keratin as a nutrient source. *Tinea capitis* and *Tinea corporis* are most frequently seen in children, while *Tinea unguium*, *Tinea pedis* and *Tinea versicolor* are more common in adults.1 Though *Tinea capitis* is common in children dermatophytic skin infections in infancy are uncommon.2,3

*Trichophyton violaceum* is an anthropophilic dermatophyte. Human is the natural habitat; incidence is less common and geographically restricted. It is a most common etiologic agent causing dermatophytosis in Egypt.4 *T. violaceum* was found to be the most common etiological agent in *Tinea corporis* in Libya.5 We report here a case of *Tinea corporis* due to *T. violaceum* in a 18-day-old neonate because of its rarity.

Case Report

An 18-day-old female child was brought to the dermatology out patient department of the B.Y. L. Nair Charitable Hospital, Mumbai with multiple scaly erythematous annular plaques on face, trunk and extremities of eight days duration. The mother gave history of full term normal delivery in a private hospital. There were 13 members in the family (over crowded). The family history revealed *T. capitis* infection in two siblings and ringworm infection in the maternal uncle. The mother also has *Tinea unguium* infection. She was non-diabetic and VDRL non-reactive. There were no pets in the house. There was no history of local medicament or contact with soil.

The cutaneous examination of the patient revealed a well defined 2 x 2 cm size erythematous annular plaques with raised border and minimum scaling at periphery seen on chest, face and extremities (Fig. 1a, b). Scalp and nails were normal. The systemic examination was non-contributory. Samples were collected in sterile petri dishes under aseptic precautions.

Microscopic examination from the scales was performed following treatment with an aqueous solution of 10% potassium hydroxide (KOH) for the presence of fungal elements and their diagnostic morphology. It showed branching hyphae (Fig. 2a). The culture was done on Sabouraud dextrose agar. The culture revealed colonies, which were very slow growing, waxy, heaped, folded and deep violet in color (Fig. 2b). Reverse is lavender to purple (Fig. 2c).

The isolate was examined microscopically using lactophenol cotton blue which showed tangled branched irregular hyphae with chlamydospores. (Fig. 3).

The patient was treated with 2% miconazole nitrate cream for four weeks however the lesions cleared within 2 weeks. Repeat culture after four weeks revealed no fungal growth.

Discussion

*Tinea corporis* refers to dermatophytosis of the glabrous skin and may be caused by anthropophilic dermatophytes.

Figure 1: a) Erythematous annular plaques with raised border, b) Neonate showing erythematous annular plaques. Mother’s finger showing *Tinea unguium*
Dermatophytic infection is rare in infancy, neonatal infection is still rarer.\textsuperscript{3} Report of dermatophytic infections in the first two weeks of life are scanty however, $T$. tonsurans, $T$. mentagrophyte and $T$. violaceum infections starting at nine days, two days and six days have been reported.\textsuperscript{6} No fungus was isolated from mother and uncle though they clinically presented as tinea infection. The two siblings were diagnosed as $T$. capitis infection due to $T$. violaceum previously investigated.

In our study large family size, close family contacts and sharing of personal items such as combs, towels etc. could be the cause of Tinea corporis transmission in the patient. Similar observations have been reported with $T$. violaceum transmission in Libya.\textsuperscript{5}

References


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