Tinea Corporis Caused by Trichophyton Mentagrophytes Var. Granulosum

by

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(with 4 figs.)

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The purpose of this report is to describe three cases of human tinea corporis apparently transmitted by a pet rat, and to emphasize the association of the granular form of Trichophyton mentagrophytes (T. mentagrophytes var. granulosum, T. granulosum) with ringworm infection of animal origin. Since Sabouraud’s (10) initial description of this organism, first isolated during an equine epidemic in France in 1909, it has been established as a frequent inhabitant of many different animals and an occasional cause of infection in man. In addition to isolated cases, small and large epidemics have been reported. (1—3).

Report of Cases

Case 1. — A 23 year old white man, a barber, had noted the onset of a pruritic, scaly eruption on the back of the right hand two weeks prior to his initial examination. Similar lesions rapidly appeared on both upper extremities during the following week. Vesculation and increased pruritus occurred following systemic and topical administration of corticosteroids prescribed by his family physician.

One week before the appearance of the first lesion, the patient had acquired a stray white rat as a pet. This animal had been captured by the patient’s friend and had been handled freely by the patient, the friend, and the patient’s girl friend.

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The patient was referred to the Skin and Cancer Hospital for mycologic study. A granular strain of *T. mentagrophytes* was isolated from scales taken from the lesions. The patient was then asked to return for further studies along with his girlfriend and pet rat. The friend who captured the rat was reported to have lesions on his thighs, but he was not available for study.

The patient had numerous 2 to 4 cm erythematous, vesicular, scaly, edematous, circular and irregular patches with sharply defined borders, and no evidence of central clearing. Most of the lesions were clinically suggestive of nummular eczema and others appeared psoriasiform. Only a few lesions resembled tinea corporis. The lesions were distributed over the dorsa of the hands, volar wrists, forearms, and left upper arm (Figs. 1—3).

Scales from the lesions contained numerous hyphae on direct microscopic examination and produced growth of a granular strain of *T. mentagrophytes* in about four days on Sabouraud’s glucose agar with cycloheximide and on Littman’s oxgal I agar.

Histologic sections of a biopsy specimen from a typical lesion were studied by James H. Graham, M.D. The hematoxylin- and eosin-stained sections showed slight hyperkeratosis, spotted parakeratosis, spongiosis, exocytosis, acanthosis, and microabcesses containing neutrophils. In the upper corium, there were a perivascular inflammatory infiltrate and an angitis of the capillaries.

Some of the dermal papillae showed extravasated red blood cells.

Fig. 1. Case 1. Lesions on dorsum of right hand.