IMAGES IN MYCOLOGY

J Mycol Infect 2018; 23(4): 118-119
pISSN:1226-4709, eISSN:2465-8278
http://dx.doi.org/10.17966/JMI.2018.23.4.118

JMI

Macroscopic and Microscopic Findings of *Trichophyton verrucosum* Isolated from Cattle

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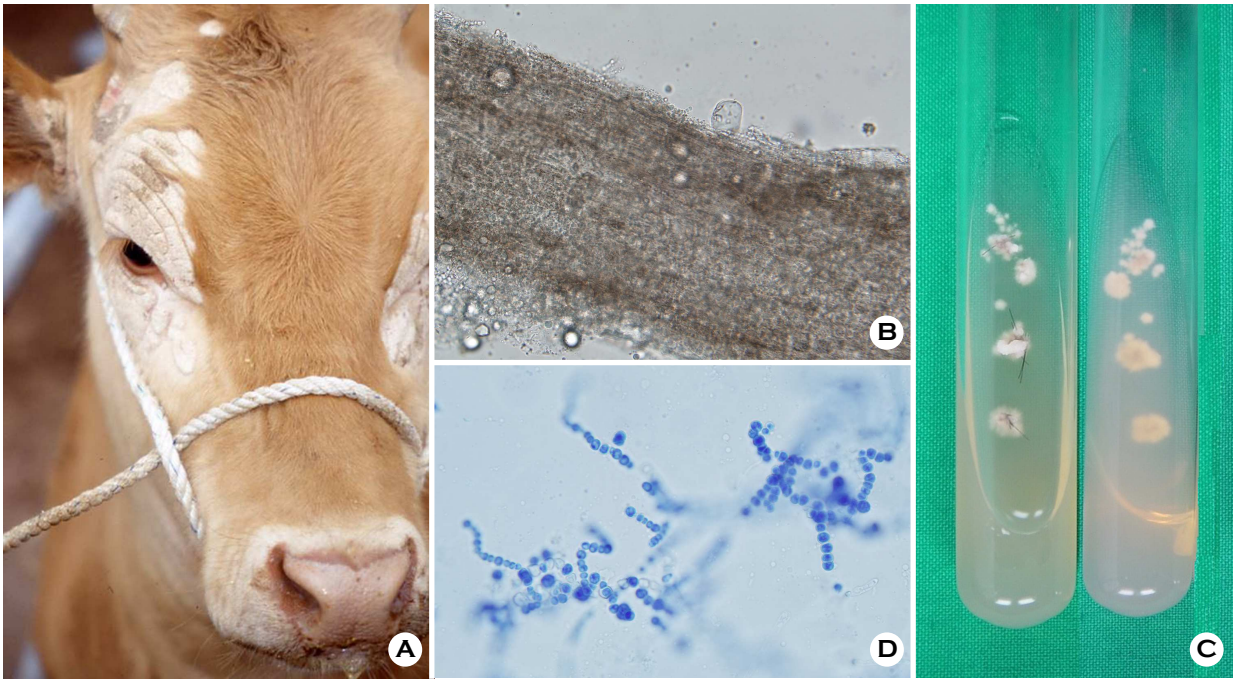

Fig. 1. (A) Multiple, walnut to child-palm-sized, whitish plaques on the scalp and face of infected cattle (B) Chains of chlamydoconidia around the hair shaft (KOH mount, ×400) (C) Slow-growing, folded, heaped, glabrous, white colonies on Sabouraud's dextrose agar at 25℃ for 3 weeks, no pigment on the reverse side of Sabouraud's dextrose agar (D) Chains of chlamydoconidia in the slide culture of *T. verrucosum* (Lactophenol cotton blue, ×400)

Trichophyton verrucosum, a zoophilic dermatophyte, is distributed worldwide and is the most common causative pathogen of dermatophytosis caused by cattle[1,2]. *T. verrucosum* is occasionally transmitted to humans by direct contact

Received: June 19, 2018 Revised: June 30, 2018 Accepted: November 30, 2018
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with an infected cattle's skin. Since Kim et al. reported the first case of dermatophytosis caused by *T. verrucosum* isolated from a cattle in Korea in 1986, 10 more cases of dermatophytoses caused by cattle have been reported thereafter. The common clinical manifestations of *T. verrucosum* are sycosis and tinea corporis, usually on exposed skin surfaces. Because infections due to *T. verrucosum* are usually characterized clinically by intense inflammation, they are often misdiagnosed as eczema, herpes, or bacterial folliculitis[3].

The infection presents with multiple, walnut to child-palm-sized, whitish plaques on the scalp and face of cattle infected with *T. verrucosum* (Fig. 1A). Direct microscopic examination of a hair infected with *T. verrucosum* reveals several chains of chlamydoconidia present around the hair shaft (Fig. 1B). The macroscopic morphology of *T. verrucosum* reveals that it is slow-growing, folded, heaped, and glabrous; they form white colonies, lacked pigment on the reverse side (Fig. 1C), and the microscopic morphology of *T. verrucosum* shows chains of chlamydoconidia (Fig. 1D).

The characteristic microconidia are tear-shaped microconidia and, less frequently, string-bean-shaped, and 3-5-celled macroconidia on blood agar enriched with thiamine and inositol[1]. Microscopic examination and macroscopic morphology are necessary for the identification of causative organisms; however, physicians can identify species more precisely by molecular biological analyses.

Key Words: Morphology, *Trichophyton verrucosum*

CONFLICTS OF INTEREST

In relation to this article, We declare that there is no conflict of interest.

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