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Inflammatory tinea faciei accompanying multiple annular erythema and facial edema related to *Microsporum canis*

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To the Editor:

Tinea faciei is a common dermatophyte infection in countries with warm and wet climates. Most cases of tinea faciei are induced by the anthropophilic organisms *Trichophyton rubrum* and *Trichophyton tonsurans*, but zoophilic organisms such as *Microsporum canis* also can cause tinea faciei [1]. Tinea faciei caused by zoophilic dermatophytes often provokes severe inflammation. However, entire facial edema by infection with any dermatophyte has not been reported. Herein, we demonstrate a case of tinea faciei which accompanied severe cutaneous eruption and facial edema owing to *M. canis*.

A 27-year-old woman was referred to our department with facial edema and multiple areas of erythema on her face that developed 10 days prior to presentation. She had been treated with pulse corticosteroid therapy at a local clinic, but the skin eruption spread to her limbs. Relevant history included that she had taken in a stray cat 7 days before the development of the skin lesions. Physical examination revealed marked facial edema and multiple vesicular papules and annular erythematous plaques on her face, neck, and limbs (**Figure 1A**).

Following a positive potassium hydroxide examination, fungal culture on Sabouraud dextrose medium showed white spread-out colonies with

yellow pigmentation (**Figure 1B**). Slide culture revealed branching septate hyphae and multicellular macroconidia (**Figure 1C**). *Microsporum canis* was identified by the evaluation of DNA sequencing of the D1/D2 region of the 28S rDNA and the internal transcribed spacer region. Oral administration of

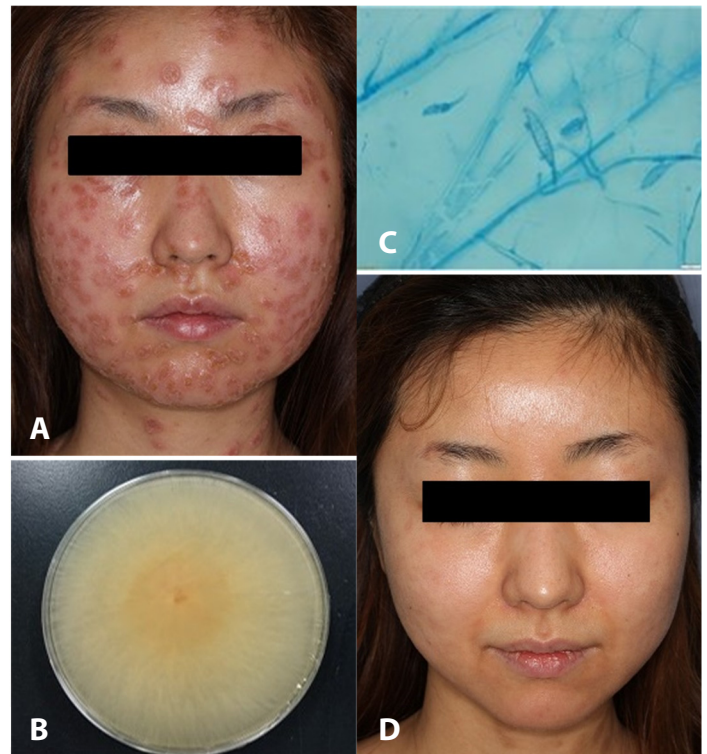


Figure 1. **A)** Facial edema and multiple erythema. **B)** Fungal culture on Sabouraud dextrose medium. White spread-out colonies with yellow pigmentation were observed. **C)** Slide culture. Branching septate hyphae and multicellular macroconidia are shown. **D)** Complete clearance of erythema and facial edema after treatment with itraconazole.

itraconazole 100mg daily for 8 weeks resulted in complete clearance of the erythema and facial edema (**Figure 1D**).

The prevalence of tinea faciei has been increasing recently, but it still represents less than 10 % of all clinical types of superficial dermatophyte infections [1], suggesting it is a relatively rare cutaneous fungal disease. The clinical appearance of tinea faciei simulates other dermatoses including contact dermatitis, cutaneous lupus erythematosus, and Sweet syndrome [2-4]. However, to the best of our knowledge, facial edema has not been presented in these reports. In addition to the facial edema, multiple annular erythematous plaques might lead to the diagnosis of some reactive dermatoses in our case. We identified *M. canis* in the skin of our patient. It is reported that the isolation of *M. canis* is about 20 % in tinea faciei [1]. Since *M. canis* is well known to cause dermatophytosis in cats and dogs, our patient

likely developed tinea faciei from contact with the stray cat. The reason why *M. canis* elicited entire facial edema was unclear in our patient, and further studies are desired to elucidate the pathophysiological mechanism of zoophilic dermatophyte-induced severe skin inflammation.

In summary, we have demonstrated a case of tinea faciei which was accompanied by a severe cutaneous eruption and facial edema. As for the patient described here, strong corticosteroid therapy is often misused because of misdiagnosis of various inflammatory diseases. It is recommended to utilize a potassium hydroxide examination in suspected cases of dermatophyte infection before anti-inflammatory treatment.

Potential conflicts of interest

The authors declare no conflicts of interest.

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