

The Importance of Diagnosis of Causative Agents of Tinea capitis

Ivana Indikova¹, Karin Loydl¹, Angelika Stary¹

¹ Outpatient's Centre for Diagnosis of Infectious Venero-Dermatological Diseases, Vienna, Austria

Background: The zoophilic fungus *Trichophyton (T.) benhamiae* (previously *T. species of Arthroderma (A.) benhamiae*) is a causative agent of inflammatory dermatophytosis in children and adolescents and can cause tinea capitis and tinea faciei.

A 9-years old boy was recommended to the Outpatient's Centre for Fungal Infections in Vienna because of deep putride lesions on the scalp, combined with loss of hair.



The disease level of the patient by the first examination. A 9-years old boy previously treated with Cortison for a period of 2 months. At the time of the first examination in the Outpatient's Centre for Fungal Infections, the lesions covered more than half of the scalp and were accompanied by the loss of hair. Moreover, the infection has proceed to the face, neck and brust.

Diagnosis: Mycological diagnosis of the skin scraping and the hair was performed based on macroscopic and microscopic examination of fungal cultures on Sabouraud plates. The identification of fungal elements demonstrated *T. benhamiae*.



Tab.1: In the Outpatient's Centre in Vienna, 905 cases of tinea corporis and tinea capitis were diagnosed from 2016 to 2019. *M. canis* was identified in 802 (92%) and *T. benhamiae* in 103 (8%) patients, respectively, as the causative agent. Of the 103 cases, 79 patients had lesions on the corpus, 15 on the capillitium and 9 on the facies.

	Nannizzia canis (M. canis)	T. benhamiae
2016	82	34
2017	81	25
2018	74	28
2019	52	16
Total	802	103

The scalp after six weeks of medication. Following laboratory diagnostics, the patient was treated with terbinafin and intraconazol for six weeks. Although the skin lesions reduced dramatically and hair started to grow, the cultivation of the skin and hair samples still revealed presence of active fungi. The patient was treated another four weeks, until the cultivation confirmed the absence of *T. benhamiae*.



Conclusion: Early diagnosis of dermatophytosis as the causative agent of lesions on the scalp and the identification of the source of infection is necessary for a successful therapy in patients and family members.