



AGENTS OF TINEA CAPITIS AND THEIR DISTRIBUTION ACCORDING TO AGE GROUPS IN THE AEGEAN REGION OF TURKEY, 1974-2011

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Introduction: Tinea capitis is a common dermatophyte infection of the scalp affecting mainly children and rarely adults. It may occur sporadically or epidemically. The incidence and the etiologic agents of Tinea capitis vary according to the climate, temperature, relative humidity, and precipitation of different geographic regions as well as the natural reservoirs of infection. An increase in its incidence has been noted over the last few decades.

Aim: This retrospective study was carried out with the aim of determining the agents of Tinea capitis and their distribution according to age and gender in the Aegean Region of Turkey, 1974-2011, using the data obtained from the Mycology Laboratory, Faculty of Medicine, Ege University.

Material and Method: The scalps of 4065 patients (2331 male and 1734 female) suspected to have Tinea capitis were thoroughly examined in all areas for the evidence of scaling, crusting, follicular inflammation, hair loss and erythema. The patients were also examined under Wood's ultraviolet light. The scale scrapings were collected with number 15 sterile surgical blades, 8 to 10 hair stumps were collected with tweezers and the specimens were placed in sterile petri dishes. The 20% KOH preparations of the specimens were examined under light microscope. The presence of fungal hyphae and spores was accepted as positive microscopy. The remaining of scrapings and hairs were then seeded on two separate plates of Sabouraud's dextrose agar containing chloramphenicol, one with and the other without cycloheximide. The agar plates were incubated at a temperature of 26 °C for four weeks and checked twice weekly. Isolated dermatophytes were identified based on growth rate, microscopic morphology of slide cultures, and production and potential diffusion of pigment on potato dextrose agar.

Results: The patients were grouped according to their age and gender. In 925 patients cultures yielded dermatophytes. Culture positivity was highest (37.6%) in children 5-9 years of age. The agents of Tinea capitis, in order of frequency, were *Microsporum canis* (58.8 %), *Trichophyton violaceum* (20.1 %), *T. verrucosum* (9.0 %), *T. schoenleinii* (5.1%), *T. rubrum* (4.0 %), *T. mentagrophytes* (1.2 %), *T. tonsurans* (0.9 %), *M. gypseum* (0.8 %) and *Epidermophyton floccosum* (0.2%). *Microsporum canis* infection was found in % 69.5 of male and in % 30.5 of female patients with Tinea capitis. The results are shown in the Table.

Conclusion: It was concluded that in the last 37 years the most frequent agent of Tinea capitis was *M. canis* with a predominance of male elementary school children. The diagnosis and proper treatment of mycotic scalp infection is important. Therefore, an increased level of screening in schools, and a highly effective interdisciplinary cooperation among general practitioners, mycologists, veterinarians and dermatologists is strongly recommended.

Table. Distribution of dermatophytes according to age

Age	<i>M. canis</i>	<i>M. gypseum</i>	<i>T. rubrum</i>	<i>T. mentagrophytes</i>	<i>T. violaceum</i>	<i>T. schoenleinii</i>	<i>T. verrucosum</i>	<i>T. tonsurans</i>	<i>E. floccosum</i>
0-4	114	3	12	0	32	6	10	2	1
5-9	319	2	18	4	89	16	41	3	0
10-14	94	2	3	5	41	10	21	1	0
15-19	6	0	0	0	4	7	7	2	1
20-24	2	0	0	0	2	3	1	0	0
25-29	0	0	3	0	3	2	0	0	0
30-34	0	0	0	1	2	0	0	0	0
35-39	1	0	0	0	0	0	1	0	0
40-44	2	0	0	0	1	0	0	0	0
45-49	2	0	1	0	0	0	0	0	0
50-54	2	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	1	0	0
60 -	2	0	0	1	12	3	1	0	0
Total	544 (58.8 %)	7 (0.8 %)	37 (4.0 %)	11 (1.2 %)	186 (20.1 %)	47 (5.1%)	83 (9.0 %)	8 (0.9 %)	2 (0.2%)