An unusual presentation: trichomycosis (trichobacteriosis) capitis in an infant

Zennure Takcı[1], Ayşe Serap Karadağ[2]

Department of Dermatology, [1]Gaziosmanpasa University Faculty of Medicine, Tokat, Department of Dermatology, [2]Istanbul Medeniyet University Faculty of Medicine, Göztepe Research and Training Hospital, Istanbul, Turkey. E-mail: drzennure80@yahoo.com

Received: 25 March 2014, Revised: 28 August 2014, Accepted: 23 September 2014

SUMMARY: Takcı Z, Karadağ AS. An unusual presentation: trichomycosis (trichobacteriosis) capitis in an infant. Turk J Pediatr 2014; 56: 677-679.

Trichomycosis (trichobacteriosis) is an asymptomatic superficial bacterial colonization of the hair shaft that is clinically characterized by pale yellowish, reddish or blackish sticky, cylindrical concretions surrounding the hair shaft in the axillary or pubic region. As far as we know, the first and only case of trichomycosis capitis was reported in a 8-year-old boy in 2011. We encountered no cases of trichomycosis in infancy in the literature. The current case displays an atypical presentation of trichobacteriosis involving head hair in a 10-month-old male infant.

Key words: Corynebacteria, infancy, head hair, trichobacteriosis.

Trichomycosis is a superficial bacterial infection of the hair shaft, caused by the genus *Corynebacteria* (usually *Corynebacterium tenuis*). It is clinically characterized by adherent yellowish, reddish or blackish concretions surrounding the hair shaft in sweat gland-bearing areas, such as the armpits and the pubic area.[1,2] There is only one report in the literature concerning trichomycosis in head hair.[3] We report herein a 10-month-old male infant who presented for evaluation of sticky, yellowish concretions on the hair shafts over the occipital scalp.

Case Report

A 10-month-old male infant presented with creamy yellow material along a number of hair shafts in the occipital area. His mother stated that she had noticed the condition for one month and that the boy had a tendency toward excessive sweating around the nape. The infant had been full-term and was delivered vaginally without any perinatal problems. He had no systemic problems. His mother and father had no similar hair shaft infections on the head or in the axillary or pubic areas. On examination, creamy yellow concretions were seen along several hair shafts on the occipital (retroauricular) region of the scalp (Fig. 1). Examination with a Wood light in a darkened room revealed a pale yellowish-white fluorescence of the affected hairs (Fig. 2). Microscopic examination of some hair shafts after topical administration of 15% potassium hydroxide solution supported the diagnosis of trichobacteriosis (opaque creamy concretions surrounding the hair, without invasion of the hair cortex). There were no hyphae or spores to favor diagnosis of a dermatophyte infection. With a clinical diagnosis of trichobacteriosis, the patient was treated by shaving the affected hair, followed by the topical use of 5% benzoyl peroxide gel for two weeks, with resolution. The parents were advised to use antiseptic shampoo on him to avoid recurrence.

Discussion

A more accurate nomenclature for trichomycosis would be trichobacteriosis, because it is not a fungal infection but an asymptomatic superficial bacterial colonization of the hair shaft. Trichomycosis is clinically characterised by pale yellowish, reddish or blackish sticky, cylindrical sheaths caused by *Corynebacteria*[1,2]. This bacterial family is responsible for pitted keratolysis, trichobacteriosis and erythrasma. When these infections arise in the same individual simultaneously, it is called the "corynebacterial triad"[1,4]. Trichomycosis predominantly affects intertriginous areas, mostly the axillae, but involvement of the

pubic and scrotal hairs has been reported[4-6]. De Almeida et al.[2] reported the first, and unique, case of trichomycosis in the head hair of an 8-year-old boy.

Herein, we described a 10-month-old male infant with trichobacteriosis affecting the hair on the occipital scalp. The case reported here demonstrates an unusual age and localization. The data in the literature on the demographic features of patients suffering from trichomycosis is incomplete. We did not encounter any cases of trichomycosis in infancy in the literature. The *Corynebacteria* family is part of the natural skin flora, and there is no evidence for exogenous contamination. Local environmental changes, including excessive sweating, poor local hygiene, warmth and moisture, lead to an over abundance of these coryneforms[1,7].

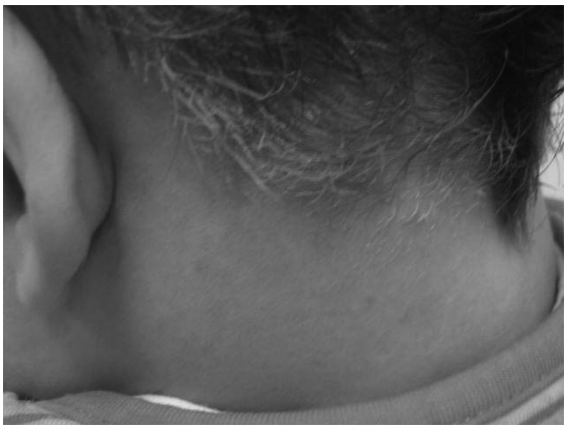

Fig. 1. Creamy yellow concretions along a number of hair shafts on the occipital (retroauricular) region of the scalp.

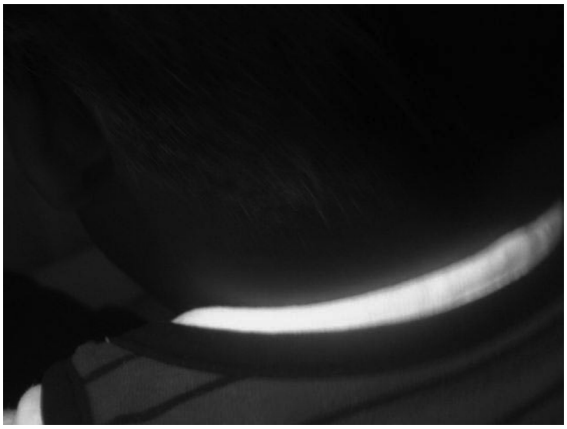

Fig. 2. Wood's light examination, revealing yellowish-white fluorescence.

The origin of the adherent concretions that ensheathe the hair shaft may be the product of the organisms, or they may be derived from dried apocrine sweat[8,9]. The present case is an infant, so he had no apocrine gland activity but did have excessive sweating around the nape, with poor hygiene. The diagnosis of trichomycosis is made clinically; usually, visual inspection is sufficient for diagnosis. Wood's lamp examination, histochemical staining, culture, dermoscopy or potassium hydroxide examination of the involved hair shaft under the microscope may be useful in doubtful cases[1,2,10]. The differential diagnosis includes pediculosis, white piedra, black piedra and hair casts[1,3,11].

The patient received a diagnosis of trichomycosis capitis clinically, and the diagnosis was confirmed by Wood's lamp and potassium hydroxide examination. The patient was treated by shaving the involved hairs, followed by topical 5% benzoyl peroxide gel. Washing the hair with antiseptic shampoo was recommended to prevent relapses. We report this case to demonstrate an unusual age and localization for trichobacteriosis infection. The current case displays an atypical presentation of trichobacteriosis involving head hair in infancy.

REFERENCES

1. Blaise G, Nikkels AF, Hermanns-Lê T, Nikkels-Tassoudji N, Piérard GE. Corynebacterium-associated skin infections. Int J Dermatol 2008; 47: 884-890.
2. Ma DL, Vano-Galvan S. Images in clinical medicine. Trichomycosis axillaris. N Engl J Med 2013; 369: 1735.
3. De Almeida H Jr, Götze F, Heckler G, Marques e Silva R. Trichomycosis capitis: first report of this localization and ultrastructural aspects. Eur J Dermatol 2011; 21: 823-824.
4. Rho NK, Kim BJ. A corynebacterial triad: prevalence of erythrasma and trichomycosis axillaris in soldiers with pitted keratolysis. J Am Acad Dermatol 2008; 58: S57-S58.
5. Noble WC, Savin JA. Trichomycosis of the scrotal hair. Arch Dermatol 1985; 121: 25.
6. Lestringant GG, Qayed KI, Fletcher S. Is the incidence of trichomycosis of genital hair underestimated? J Am Acad Derm 1991; 24: 297-298.
7. Kaźmierczak AK, Szarapińska-Kwaszewska JK, Szewczyk EM. Opportunistic coryneform organisms—residents of human skin. Pol J Microbiol 2005; 54: 27–35.
8. Levit, F. Trichomycosis axillaris: a different view. J Am Acad Dermatol 1988; 18: 778-779.

9. Coyle MB, Lipsky BA. Coryneform bacteria in infectious diseases: clinical and laboratory aspects. Clin Microbiol Rev 1990; 3: 227-246.

10. Guiotoku MM, Ramos PM, Miot HA, Marques SA. Trichobacteriosis: case report and dermoscopic study. An Bras Dermatol 2012; 87: 315-316.

11. Bonifaz A, Váquez-González D, Fierro L, Araiza J, Ponce RM. Trichomycosis (trichobacteriosis): clinical and microbiological experience with 56 cases. Int J Trichology 2013; 5: 12-16.