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Trichostasis Spinulosa Confirmed by Standard Skin Surface Biopsy

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Abstract

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Trichostasis spinulosa (TS) is a common but rarely diagnosed disease. For diagnosis, it's sufficient to see a bundle of vellus hair located in a keratinous sheath microscopically. In order to obtain these vellus hair settled in comedone-like openings, Standard skin surface biopsy (SSSB), a non-invasive method was chosen. It's aimed to remind the differential diagnosis of TS in treatment-resistant open comedone-like lesions and discuss the SSSB method in diagnosis. A 25-year-old female patient was admitted with a complaint of the black spots located on bilateral cheeks and nose for 12 years. In SSSB, multiple vellus hair bundles in funnel-shaped structures were observed under the microscope, and a diagnosis of 'TS' was made. After six weeks of treatment with tretinoin 0.025% and 4% erythromycin gel topically, the appearance of black macules was significantly reduced. Treatment had to be terminated due to her pregnancy, and the lesions recurred within 1 month. It's believed that TS should be considered in the differential diagnosis of treatment-resistant open comedone-like lesions, and SSSB might be an inexpensive and effective alternative method for the diagnosis of TS.

Keywords: Trichostasis spinulosa, diagnosis, standard skin surface biopsy

INTRODUCTION

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Trichostasis spinulosa (TS) is a relatively common but rarely diagnosed disease of hair follicles. Both women and men are affected equally and it can occur at any age after adolescence.[1] Two variants of TS have been described: The classic non-pruritic type is often seen in the elderly as asymptomatic blackhead-like lesions located on the face, and the pruritic type is seen as multiple pinhead-sized papules on the trunk and upper extremities in young adults.[2] Differential diagnosis of facial lesions includes comedogenic acne, keratosis pilaris, eruptive vellus hair cysts, and Favre-Racouchot syndrome. TS could be differentiated from these diseases by microscopic examination of the contents of black papules. For diagnosis, it is sufficient to observe a bundle of vellus hair located in a keratinous sheath microscopically. Histopathologic examination reveals a dilated hair follicle containing multiple vellus hair with mild inflammation.

CASE REPORT

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A 25-year-old female patient was admitted with a complaint of black spots on her face. Lesions were present since the age of 13 years, and with a diagnosis of acne, she had used topical antibiotics (clindamycin and tetracycline) without any improvement. Dermatological examination revealed multiple black-colored macules located bilaterally on the cheeks and nose [Figure 1]. Dermoscopic examination revealed that the black macules were actually vellus hair. To examine these hairs, a standard skin surface biopsy (SSSB) was performed. Multiple vellus hair bundles in funnel-shaped structures were observed under the microscope [Figure 2], and a diagnosis of 'TS' was made. A topically applied treatment, composed of 0.025% tretinoin and 4% erythromycin gel, was recommended daily at bedtime. Six weeks

later, the appearance of black macular lesions on the face was significantly reduced. However, due to her pregnancy, the treatment had to be terminated, and her lesions recurred within 1 month.

DISCUSSION

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In the etiology of TS, follicular retention of vellus hair in the telogen phase and the role of external factors such as dust, oily products, heat, ultraviolet radiation, and irritants are proposed.[3] Hydroactive adhesive pads, topical keratolytic agents, and retinoic acids can be used in the treatment.[4] The disease usually follows a chronic refractory course and tends to repeat after discontinuation of treatment. 800 nm pulse-diode, long- and short-pulsed 755 nm alexandrite lasers have been reported to be effective in the removal of abnormal hair follicles.[5,6,7]

SSSB is used for diagnosis of demodicosis.[8] Along with demodex mites, hair follicles are also collected with cyanoacrylate on slides during implementation of SSSB, and can be examined under a microscope. To obtain these vellus hair situated in comedone-like openings, SSSB was performed. Examination of the obtained material revealed numerous vellus hair bundles wrapped around funnel-shaped keratinous material and a diagnosis of TS was made. In the diagnosis of TS, histopathological examination of the hair follicle and its contents would not provide additional information over the SSSB method; therefore, the non-invasive method was chosen. These findings might be suggestive of an additional area of application for SSSB in diseases that require the examination of vellus hair, such as TS.

In conclusion, when treatment-resistant comedone-like lesions are seen, TS should be considered in the differential diagnosis. Additionally, SSSB, which can easily be applied in all office settings with a microscope, might be an inexpensive and effective alternative method for the diagnosis of TS.

Footnotes

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Source of Support: Nil

Conflict of Interest: None declared.

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Figures and Tables

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Figure 1



Multiple black-colored macules located bilaterally on the cheeks and nose

Figure 2



A bundle of more than six vellus hair located in a keratinous sheath ($\times 10$)

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