Ann Dermatol Vol. 29, No. 5, 2017
pISSN 1013-9087 · eISSN 2005-3894
https://doi.org/10.5021/ad.2017.29.5.633

BRIEF REPORT

Köebner Phenomenon Induced by Striae Distensae in a Vitiligo Patient

Rui-xing Yu[1,2], Yun Hui[2], Cheng-rang Li[2]

[1]*Department of Dermatology, China-Japan Friendship Hospital, Beijing,* [2]*Department of Dermatology, Institute of Dermatology, Chinese Academy of Medical Sciences & Peking Union Medical College, Nanjing, China*

Dear Editor:

An 18-year-old boy presented to the dermatology outpatient department with vitiligoinous lesions occurring in the distribution of striae distensae (SD) at groin area. He had tinea cruris three years ago and continually used topical steroids one year by himself. After about one year, he got SD and vitiligoinous lesions at the same position. Systemic examination did not reveal any abnormalities. Laboratory examination revealed a normal blood, urine, stool, liver and kidney tests. On skin examination (Fig. 1), vitiliginous lesions were on SD. There were some small vitiliginous lesions on normal skin. SD without vitiliginous lesions were gray brown. The boundary between lesions and normal skin was distinct. On Wood's lamp examination, enhancing lesions were noted at vitiliginous lesions. The patient was administrated mecobalamin tablets 0.5 mg three times a day, folic acid tablets 5 mg three times a day and 0.03% tacrolimus ointment once a day.

Köebner phenomenon (KP) was first described in psoriasis by Heinrich Köebner in 1877 and generally accepted classification divides the koebnerizing skin diseases into four categories: diseases showing true koebnerization, pseudo-koebner phenomenon, occasional traumatic localization of disease and poor or questionable trauma-induced processes. Only vitiligo, psoriasis, and lichen planus were considered to exhibit true koebnerization[1]. It has reported that KP in vitiligo patients could be induced by blunt trauma such as pressure, tightening of the sari or even sunburn and therapeutic irradiation for treatment of breast cancer. Based on previous literature, SD is also considered as blunt trauma to develop KP in vitiligo patients and so far three similar cases (Table 1) have been reported[2-4].

SD are very common at dermatology department and manifested in a variety of conditions, including pregnancy, rapid gain or loss of weight, debilitating infection, illness, Cushing's syndrome and corticosteroid therapy, Marfan syndrome, patients with HIV infection receiving the protease inhibitor indinavir, chronic liver disease and so on. SD, featured with white or red liner streaks on the skin, run perpendicular to the direction of the skin tension.

KP induced by SD has not been studied at molecular

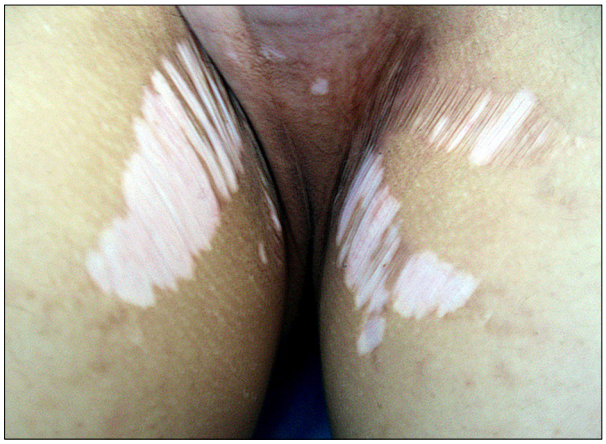

Fig. 1. Vitiliginous lesions and striae distensae on groin area.

Received October 2, 2013, Revised February 22, 2014, Accepted for publication March 1, 2014

Corresponding author: Cheng-rang Li, Department of Dermatology, Institute of Dermatology, Chinese Academy of Medical Sciences & Peking Union Medical College, NO.12, Jiang-wang-miao road, Nanjing 210042, Jiangsu Province, China. Tel: 86-13645153971, Fax: 86-025-85478071, E-mail: nylcr72@163.com

Table 1. Köebner phenomenon induced by striae distensae in vitiligo patients

Author	Report time	Age (yr)	Sex	Factors
Verma[2]	2009	18	Girl	Growth spurt, sudden weight loss
Verma[3]	2009	-	Girl	Sudden growth loss
Iftikhar et al.[4]	2009	14	Boy	May be systemic steroid use

level. Verma[3] suggested that there may be an imperceptible microscopic trauma to the epidermis during the formation of striae, which may induce koebnerization of vitiligo. Hermanns and Piérard[5] found that direct and/or indirect influences of melanocyte mechanobiology appear to have a prominent effect on the various colours of SD. Although these studies did not focus the relationship between vitiligo and SD, they may be indicators for us to do some deep research.

Topical steroids are the mainstay drugs for vitiligoinous lesions, but longer duration of using topical steroids is a key factor contributing to SD, which are considered as a blunt a trauma to develop KP. KP is a very common phenomenon not only in vitiligo patients, but also in psoriasis and lichen planus patients. So in order to prevent SD developing KP in vitiligo, psoriasis and lichen planus patients, we recommended the topical use of nonsteroids such as calcineurin inhibitors for vitiligo patients in the striae-distensa-prone area.

ACKNOWLEDGMENT

Thank for the Foundation of PUMC innovation team, Teaching and Research Fund Project of PUMC (Grant No. 2011zlgc0114, 303-05-8050).

CONFLICTS OF INTEREST

The authors have nothing to disclose.

REFERENCES

1. Boyd AS, Neldner KH. The isomorphic response of Koebner. Int J Dermatol 1990;29:401-410.
2. Verma SB. Vitiligo precipitated by striae: a little known entity. J Eur Acad Dermatol Venereol 2009;23:357-358.
3. Verma SB. Striae: stretching the long list of precipitating factors for 'true koebnerization' of vitiligo, lichen planus and psoriasis. Clin Exp Dermatol 2009;34:880-883.
4. Iftikhar N, Rahman A, Janjua SA. Vitiligo appearing in striae distensae as a Koebner phenomenon. J Coll Physicians Surg Pak 2009;19:796-797.
5. Hermanns JF, Piérard GE. High-resolution epiluminescence colorimetry of striae distensae. J Eur Acad Dermatol Venereol 2006;20:282-287.