Bier spots: a benign vascular anomaly

Alice He,1 Shawn G Kwatra,1 Noori Kim,1 Inbal Braunstein1,2

1Department of Dermatology, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA
2Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA

Correspondence to
Dr Shawn G Kwatra, skwatra1@jhmi.edu

Accepted 8 February 2016

DESCRIPTION

A 26-year-old woman with a reported history of tinea versicolour presented for persistent hypopigmentation on her bilateral forearms. Detailed examination revealed multiple small (5–10 mm), irregularly shaped white macules on the extensor surfaces of the bilateral forearms overlying slightly erythematous skin. The surrounding erythematous skin blanched with pressure and with elevation of the upper extremities the white macules were no longer visible (figures 1 and 2). A clinical diagnosis of Bier spots was made based on the patient’s characteristic clinical features.

Bier spots are completely asymptomatic and are often found on the extensor surfaces of the upper and lower extremities, although they are sometimes generalised.1 They are a benign physiological vascular anomaly, arising either from cutaneous vessels responding to venous hypertension or from small vessel vasoconstriction leading to tissue hypoxia.2,3 Our patient had neither personal nor family history of vascular disease.

Bier spots are easily diagnosed by a classic sign on physical examination: the pale macules disappear with pressure applied to or elevation of the affected extremity (figure 2).4 However, Bier spots can be easily confused with a variety of other disorders associated with hypopigmented macules. The differential diagnosis includes vitiligo, postinflammatory hypopigmentation and tinea versicolour, which was a prior diagnosis in this case.1

Bier spots are often idiopathic and regress spontaneously, although there are reports of Bier spots heralding systemic diseases, such as scleroderma renal crisis, mixed cryoglobulinaemia or lymphoma.2 Since most Bier spots are idiopathic and transient, no treatment is required.1

Learning points

▸ Bier spots are diagnosed clinically by the classic presentation of pale, irregularly shaped macules distributed on the extensor surfaces of upper or lower extremities, which disappear with pressure applied to or elevation of the affected extremity.

▸ Bier spots can be easily confused with other dermatologic disorders with hypopigmented macules, including tinea versicolour.

▸ As Bier spots are asymptomatic and often idiopathic, no treatment is required.

Figure 2 Hypopigmented macules fade and disappear when patient’s right forearm (A) and left forearm (B) are raised.

Figure 1 Patient’s right forearm (A) and left forearm (B) showing multiple small symmetric hypopigmented macules against slightly erythematous skin.

Contributors AH substantially contributed to the analysis and interpretation of data for the work, drafted the work, approved the final version and is accountable for all aspects of the work. SGK substantially contributed to the design and acquisition of data for the work, revised the work, approved the final version and is accountable for all aspects of the work. NK substantially contributed to the conception and
acquisition of data for the work, revised the work, approved the final version and is accountable for all aspects of the work.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES


Copyright 2016 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit http://group.bmj.com/group/rights-licensing/permissions.

Become a Fellow of BMJ Case Reports today and you can:
► Submit as many cases as you like
► Enjoy fast sympathetic peer review and rapid publication of accepted articles
► Access all the published articles
► Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow.