Numerous, disseminated, purplish skin nodules in a patient with chronic lymphocytic leukemia

Authors: Martyna Sławińska, Małgorzata Sokołowska-Wojdyło, Maria Hlebowicz, Wojciech Biernat, Roman J. Nowicki, Michał Sobjanek

Article type: Clinical image

Received: November 7, 2020.

Accepted: November 30, 2020.

Published online: December 11, 2020.

ISSN: 1897-9483
Numerous, disseminated, purplish skin nodules in a patient with chronic lymphocytic leukemia

Short title: Disseminated skin nodules in a patient with CLL

Martyna Sławińska¹, Małgorzata Sokółowska-Wojdyło¹, Maria Hlebowicz², Wojciech Biernat³, Roman J. Nowicki¹, Michał Sobjanek¹

¹Department of Dermatology, Venereology and Allergology, Medical University of Gdańsk, Gdańsk, Poland;
²Department of Infectious Diseases, Medical University of Gdańsk, Gdańsk, Poland;
³Department of Pathomorphology, Medical University of Gdańsk, Gdańsk, Poland

Corresponding author:

Martyna Sławińska MD, PhD

Department of Dermatology, Venereology and Allergology, Medical University of Gdańsk, Smoluchowskiego 17 Street, 80-214 Gdańsk, Poland

Tel. +48585844014; fax +48585844010

E-mail: mslawinska@gumed.edu.pl

Words: 493

Tables: 0

Figures: 1

Key words: bacillary angiomatosis, bartonella, dermoscopy, vascular tumor

Conflict of interest: None
A 65-year-old woman with the diagnosis of chronic lymphocytic leukemia and chronic hepatitis B, was consulted in dermatology outpatient clinic due to numerous, disseminated, purplish skin nodules that had appeared during treatment with ibrutinib (Fig. 1A-B). The patient was previously empirically treated with doxycycline (100 mg, twice daily for 11 days) with partial improvement, but after cessation of the drug the progression was observed and elevated body temperature was noted. The other medicines that the patient was taking were lamivudine, acyclovir, allopurinol, cyclonamine, folic acid, and vitamin D3. Ibrutinib treatment was discontinued. Dermoscopically, the nodules presented the pattern of linear vessels with branches, white-pinkish structureless areas and brownish peripheral structureless area (Fig. 1C-D). At the time of consultation blood tests revealed white blood cell count of 56.91 x10⁹/l (0.5% of monocytes, basophils, and eosinophils, 5.1% of segments, 72.8% of lymphocytes, and 20.5% of lymphoid cells), red blood cell count of 3.02 x10¹²/l, mean corpuscular volume of 104.6 fl, mean corpuscular hemoglobin of 36.1 pg, hemoglobin level of 109 g/l, and platelet count of 33 x10⁹/l. Histopathological examination confirmed the diagnosis of bacillary angiomatosis (BA)(Fig. 1E-F). Treatment with clarithromycin was recommended, but after 14 days of treatment lesions become severely ulcerated and fever relapsed (Jarish-Herxheimer phenomenon). After a consultation with infectious disease specialist doxycycline treatment (100 mg, twice daily for 6 weeks) was introduced instead, leading to complete resolution of skin lesions with silencing of Jarish-Herxheimer phenomenon symptoms.

BA is a relatively rare disease caused by Bartonella henselae (B. henselae) or Bartonella quintana (B.quintana). It most commonly manifests as red-purplish skin plaques or nodules which may be associated with internal organ involvement [1]. Transmission results from cat scratches or bites contaminated with infested cat flea feces (B. henselae) or from infested human body louse that spreads the infection between humans (B.quintana). BA is
usually observed in immunocompromised patients with human immunodeficiency virus (HIV) or hepatitis B virus (HBV) infection, in the course of leukemia or during chemotherapy, but occasionally affects also immunocompetent individuals [1]. BA most commonly involves the skin, but almost every organ may be affected. Cutaneous BA lesion presents as a vascular, firm and sometimes tender plaque or tumor. The lesions may differ in size and number, and occur as a result of stimulation of proliferation and migration of endothelial cells caused by the bacteria [1]. The differential diagnosis of BA includes wide range of vascular tumors, e.g., Kaposi sarcoma, pyogenic granuloma, angiosarcoma, angiokeratoma, glomangioma, cat scratch disease, verruga peruana as well as angiolymphoid hyperplasia with eosinophilia [2-5]. Dermoscopic presentation, interpreted in the clinical context, may be useful in the initial differentiation between these entities. To our knowledge, there are no previous reports on dermoscopic observations in BA. Observed linear vessels with branches correspond with vascular proliferations, while whitish structureless areas may correspond with amorphous aggregates that stain positively with the Warthin-Starry silver stain. Brownish peripheral structureless area may correspond with the bend of the epidermis due to the underlying vascular proliferation.

Acknowledgements

Funding sources that supported the work: Publication cost supported in part from Santander Universidades Scholarship (2020) awarded to Martyna Sławińska and in part funded by the Medical University of Gdansk, Project No. 02-0066/07/253.

Contribution statement

M.SI performed dermoscopic examination, conceived the concept of the study, performed literature review and wrote initial manuscript draft. MSW and MH co-edited first manuscript version and prepared clinical figures. WB prepared histopathological figure and description.
M.So coordinated funding for the project. All authors edited and approved the final version of the manuscript.

References:


Figure 1 A-B. Bacillary angiomatosis, clinical presentation: numerous, disseminated, purplish skin nodules; C-D. Bacillary angiomatosis, dermoscopic presentation: linear vessels with branches (not crossing the central portion of the lesion), white-pinkish structureless areas and brownish peripheral structureless area (non-polarized dermoscopy; FotoFinder; x20 magnification). E-F. Histopathological presentation. E. Polypoid tumor covered with intact epidermis (artificially detached from the stroma) composed of granulation-like tissue; F. Among the capillary network dispersed neutrophils and karyorrhectic debris are visible. Warthin-Starry staining discloses aggregates of bacilli (inset).