

Generalized pustular psoriasis triggered by Zika virus infection

A. E. Paniz Mondolfi,^{1,2} M. Hernandez Perez,³ G. Blohm,⁴ M. Marquez,^{5,6} A. Mogollon Mendoza,^{5,6} C. E. Hernandez-Pereira,^{5,6} M. A. Escalona,⁵ A. Lodeiro Colatosti,^{5,7} J. Rothe DeArocha⁸ and A. J. Rodriguez Morales⁹

¹Department of Tropical Medicine and Infectious Diseases, Hospital Internacional Barquisimeto, Barquisimeto, Lara, Venezuela; ²Instituto Venezolano de los Seguros Sociales (IVSS), Department of Health, Caracas, Capital District, Venezuela; ³Department of Dermatopathology, Miraca Life Sciences Research Institute/Tufts Medical Center, Boston, MA, USA; ⁴Department of Biology, College of Liberal Arts and Sciences, University of Florida, Gainesville, FL, USA; ⁵Infectious Diseases Research Incubator and the Zoonosis and Emerging Pathogens Regional Collaborative Network, Barquisimeto, Lara, Venezuela; ⁶Health Sciences Department, College of Medicine, Universidad Centroccidental Lisandro Alvarado, Barquisimeto, Lara, Venezuela; ⁷Wonken Rural Clinic, Instituto de Salud Pública del Estado Bolívar, Ciudad Bolívar, Bolívar, Venezuela; ⁸Psoriasis Unit, Hospital Central Antonio María Pineda, Barquisimeto, Lara, Venezuela; and ⁹Public Health and Infection Research Group, Faculty of Health Sciences, Universidad Tecnológica de Pereira, Pereira, Colombia

doi:10.1111/ced.13294

Summary

Zika virus is an emerging arbovirus, which is expanding in epidemic proportions through tropical and subtropical areas of the world. Although Zika is linked to a number of congenital and neurological complications, there is scarce knowledge on the impact of ZIKV infection in human skin. We report the case of a 68-year old woman who presented with generalized pustular psoriasis after a preceding and otherwise uneventful episode of ZIKV infection. Based on recent experimental data on the biology of ZIKV infection in the cutaneous environment, we speculate that ZIKV may have directly triggered the development of generalized pustular psoriasis by stimulation of keratinocyte-derived mediators of inflammation and a polyfunctional T-cell driven immune reaction in the cutaneous milieu.

Zika virus (ZIKV) is an emerging arthropod-borne virus belonging to the Flaviviridae family,¹ which is expanding in epidemic proportions through tropical and subtropical areas around the world.¹ Transmission is predominantly vector-borne (mainly by *Aedes* mosquito species), although nonvectorial transmission (maternal–fetal, sexual, transfusion-related) has gained particular relevance during the pandemic.¹ The clinical presentation of ZIKV is nonspecific, and it is often misdiagnosed with other classic viral exanths and arboviral infections such as Chikungunya (CHIKV), Dengue and Mayaro,^{1,2} thus posing a challenge at the time of diagnosis. While ZIKV is mostly asymptomatic, the classic signs and symptoms of infection include mild fever, headaches, fatigue, rash, arthritis and/or

arthralgia, myalgia, and conjunctivitis.^{1,2} The emergence of ZIKV has been linked to the development of a number of clinical complications, mainly congenital and neurological,¹ yet, besides its self-limiting pruritic maculopapular rash, little is known about the biology and cutaneous manifestations of ZIKV disease.

Infections are among the well-known triggers of psoriasis.³ We report an exceptionally interesting case of psoriasis presenting 3 weeks after an otherwise uneventful resolution of acute ZIKV infection.

Report

A 68-year-old woman with no personal or family history of psoriasis presented with a 10-day history of generalized erythema and sharply marginated scaly plaques of acute onset. She also reported general malaise, fever and localized tenderness. Three weeks previously, she had developed a pruritic maculopapular rash along with asthenia, small joint arthralgias and conjunctival hyperaemia, which resolved uneventfully after 5 days. At that time, full blood count (FBC) and blood chemistry results were unremarkable except

Correspondence: Dr Alberto E. Paniz Mondolfi, Department of Tropical Medicine and Infectious Diseases, Hospital Internacional Barquisimeto, Avenida Intercomunal Barquisimeto-Cabudare, Urb. Las Mercedes, Cabudare, Edo. Lara 3023, Barquisimeto, 3023, Venezuela
E-mail: albertopanz@yahoo.com

Conflict of interest: the authors declare that they have no conflicts of interest.

Accepted for publication 10 June 2017