Facial Puffiness in a Returning Traveler From Puerto Rico: Chikungunya, Dengue Fever, or Zika Virus?

TO THE EDITOR—Clinical manifestations of Zika, dengue, and chikungunya infections have many features in common [1–7]. We report a case of Zika virus infection in a traveler returning from Puerto Rico, with fever, rash, myalgias/arthritis initially thought to be dengue fever because of her facial puffiness and palatal petechiae.

A 41-year-old woman was admitted with fever, rash, headache, and myalgias/arthritis for 4 days after returning to New York from Puerto Rico, where she reported multiple mosquito bites. One day before admission, a generalized non-pruritic maculopapular rash had developed. The patient reported fevers at home but she was afebrile on admission. Physical examination was remarkable for a generalized maculopapular rash that spared her palms and soles, conjunctival suffusion, facial puffiness, and palatal petechiae. No adenopathy or ankle edema was present on admission.

Laboratory results included a white blood cell count of 2100/μL and 17% relative lymphopenia (normal, >21%), with normal monocyte and platelet counts. The patient’s alanine transaminase level was 39 IU/L (normal, ≤36 IU/L), aspartate aminotransferase and alkaline phosphatase levels were not elevated. Her erythrocyte sedimentation rate, C-reactive protein and ferritin levels were within normal limits. Parvovirus B19, Coxsackie A, B, Epstein-Barr virus, and West Nile Virus titers were negative.

Clinically, the patient presented with rash, fever, and myalgias/arthritis probably due to chikungunya or dengue fever. Because at the time there was an epidemic of Zika virus in Central and South America, Zika virus infection was considered in the differential diagnosis [8–10]. However, the initial clinical impression was dengue fever because of the palatal petechiae and facial puffiness often present with that condition. Titers for dengue, chikungunya, and Zika viruses were negative, but results of reverse-transcriptase polymerase chain reaction for Zika viral RNA was positive. However, there may be serologic cross-reactivity with dengue and chikungunya viruses. A definitive plaque assay was positive for Zika virus [8–10]. During the patient’s hospital stay, her rash, arthralgias, myalgias, and facial puffiness improved, but her palatal petechiae persisted until discharge.

In a returning traveler with fever, rash, myalgias/arthritis, facial puffiness, and palatal petechiae are clinical clues that favor the diagnosis of dengue fever. Because Zika virus may mimic dengue or chikungunya fever, if results of reverse-transcriptase polymerase chain reaction are positive for Zika viral RNA, then a plaque assay should be performed to confirm the diagnosis of Zika virus [10].

Because chikungunya, dengue fever, and Zika virus all present with rash, fever, and myalgias/arthritis, clinicians are looking for clues to help suggest a clinical diagnosis pending virologic diagnosis. In this case, arthralgias and a normal platelet count favored chikungunya over dengue fever. Thrombocytopenia favors dengue fever over chikungunya [1–3]. Our patient had palatal petechiae, reported with dengue and Zika virus infection but not with chikungunya [8–10]. Facial puffiness may occur with either chikungunya or dengue fever but has not been reported with Zika virus infection [9,10]. We believe this to be the first reported case of Zika virus infection with facial puffiness and palatal petechiae.

Note

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Burke A. Cunha,1,2 Anna Apostolopoulou,1,2 Thulasi Siraranj,1,2 and Natalie C. Klein1,2

1Infectious Disease Division, Winthrop University Hospital, Mineola, and 2State University of New York, School of Medicine, Stony Brook, New York

References


Correspondence: B. A. Cunha, Infectious Disease Division, Winthrop University Hospital, 222 Station Plaza N (St 432) Mineola, NY 11501 (bacunha@winthrop.org).

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