



Case report

Chikungunya fever presenting with protracted severe pruritus



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ABSTRACT

Travelers returning from the tropics often present with rash/fever. Those with rash/fever and myalgias/arthralgias are most likely due to chikungunya fever, dengue fever, or Zika virus. In these arthropod viral transmitted infections, the rash may be pruritic. The case presented here is that of chikungunya fever remarkable for the intensity and duration of her pruritus.

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Background

In travellers returning from Jamaica, common causes of fever/myalgias include malaria, typhoid, dengue and chikungunya fever. Chills are prominent in malaria, but are less prominent in dengue and chikungunya fever, and are notably mild/absent in typhoid fever. Severe myalgias limits diagnostic considerations to influenza and dengue fever. Typhoid fever (rose spots), dengue, and chikungunya fever may present with rash. Prominent polyarthralgia, which may be long lasting, are the hallmark of chikungunya fever [1–3]. We present a case of a young African American female who returned from Jamaica with fever, chills, myalgias and headache, but no rash or polyarthralgia. Her predominant presenting symptom was severe generalized pruritus which persisted for 3 weeks.

Case

A 34 year old year old African American female was admitted with fever (104F) and chills for 6 days. She complained of headache, nausea, and painful inguinal lymph nodes. Ten days ago she returned from a 2 week trip to Jamaica and reported mosquito bites while in Jamaica. Past medical history was noncontributory and she was taking no medications. On admission, her chief complaint was severe generalized pruritus. Physical examination was unremarkable except for inguinal node tenderness/swelling and slight wrist tenderness. Her WBC count was 3.9 K/uL (atypical lymphocytes = 2%), her hematocrit/hemoglobin and platelet

counts were normal, and her ESR was 39 mm/h. Serum transaminases were normal and her alkaline phosphatase was 98 IU/L (n = 2–10 IU/L). Malaria and Babesia smears were negative. Blood and stool cultures for *Salmonella* sp. and enteric pathogens were negative. Abdominal ultrasound showed no abnormalities of the liver, gallbladder or spleen. Intense generalized pruritus remained her main complaint during hospitalization and she was discharged on hospital day # 6. After hospitalization, her pruritus persisted for 3 weeks before resolving. Serology was negative for Parvo B₁₉, EBV, CMV, HHV-6, enteroviruses A/B, HBV, HCV, rubella and HIV. Later, her dengue titers were reported negative and chikungunya titers were positive (chikungunya IgM titer was 1:1280 (n < 1:10) and IgG titer was 1:10).

Discussion

Chikungunya fever closely resembles dengue fever, i.e., fever, headache, rash, myalgias, but prominent and persistent polyarthralgia are characteristic of chikungunya fever [1–3]. Generalized lymphadenopathy may be present with chikungunya fever and dengue fever, but regional adenopathy is distinctly unusual. Our patient had otherwise unexplained painful bilateral inguinal adenopathy [4–7]. Dengue fever and chikungunya fever frequently present with leukopenia (leukocyte count was 3.9 K/mm³ in our patient) but the leukopenia is usually more pronounced with dengue fever. Atypical lymphocytes may be present in both chikungunya fever and dengue fever, but are more common in dengue (2% atypical lymphocytes were present in our patient). Thrombocytopenia is common with dengue fever, but is not usually a feature of chikungunya fever (platelet count normal in our patient) [8–10]. (Table 1) Although pruritus has been described with chikungunya fever, the severity and

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Table 1
Rash and Fever in Returning Travelers.

Maculopapular Exanthems	Adenopathy ^a	Pruritic Rash
Chikungunya fever	–	+
Dengue fever	±	+
Zika virus	–	+
Enterovirus A/B	–	–
HBV	±	–
HCV	±	–
EBV	+	–
CMV	±	–
Rubella	±	–
Parvovirus B ₁₉	–	–
HHV-6	±	–
HIV	+	–

^a Localized/generalized. Adapted from: Cunha CB, Cunha BA. Rash and Fever in the Intensive Care Unit. In: Fink MP, Abraham E, Vincent JL, Kochanek P (Editors): Textbook of Critical Care Medicine (7th Edition), Elsevier, Philadelphia, 2016, pp. 113–116.; Brasil P, Calvet GA, Siqueira AM, et al. Zika virus outbreak in Rio de Janeiro, Brazil: Clinical Characterization, Epidemiological and Virological Aspects. PLoS Negl Trop Dis 2016;10:e4636.; Thomas EA, John M, Bhatia A. Cutaneous manifestations of dengue viral infection in Punjab (North India). Int J Dermatol 2007;46:715–719; Huang W, Tseng HC, Lee CH, et al. Clinical significance of skin rash in dengue fever: A focus on discomfort, complications and disease outcome. Asian Pac J Trop Med 2016;9:713–718.

duration of pruritus in this case were remarkable [1–3]. In this case, before serologic confirmation without rash, the main diagnostic clue that suggested chikungunya fever was severe prolonged pruritus.

Competing interests

None.

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