



## Case illustrated

## Morbilliform skin rash with prominent involvement of the palms in Chikungunya fever

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## ABSTRACT

An outbreak of chikungunya occurred in Central Italy in the summer of 2017. During the outbreak, two siblings with fever and joint pain developed a morbilliform skin rash with prominent involvement of the palms. Knowledge of the characteristics of chikungunya exanthem is important to address clinical diagnosis.

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A 21 year old man living in Rome presented, on August 26, 2017, with a two-day history of high fever (39.6 °C), malaise, joint pain, and a morbilliform skin rash. The skin rash affected the face, trunk, upper limbs, and lower limbs (Fig. 1). Weakness and joint pain (ankles and wrists were slightly swollen) lasted for over two months after recovery from the acute disease. His sister, a 15 year old girl, developed the same symptoms with fever onset (38 °C) on August 25. The rash developed on the 2nd day. Joint pain affected the wrists, which appeared swollen, lasting for two months after acute disease onset. The exanthema involved the palm of the hands, particularly the fingertips, which were intensively flushed in both patients (Figs. 2 and 3).

Since an outbreak of chikungunya had been identified near the city of Roma, this diagnosis was hypothesized. On mid-September, blood samples sent to the Spallanzani hospital laboratory in Roma were positive for anti-chikungunya virus antibodies (IgM titer was 1:320 and IgG 1:640 in both patients). Blood counts and liver enzymes were within the limits.

Chikungunya is a vector-borne disease, caused by an Alphavirus transmitted by *Aedes* spp. mosquitoes. In Italy, two chikungunya fever outbreaks occurred in 2007 and in 2017 [1,2]. During the last outbreak, sporadic cases and small clusters were reported also in the city of Rome [2].

Chikungunya fever is characterized by fever, prominent and sometimes long-lasting joint pain, and a generalized maculo-papular skin rash. Differently from measles, after an initial facial flushing, the face is often spared by the exanthema. Palm involvement is not pathognomonic of chikungunya fever, and has been described also in other alphavirus fevers, such as Mayaro and Ross River disease [3,4].

In conclusion, a diagnosis of chikungunya fever should be considered when cases of fever with joint pain, accompanied by a skin rash, which may involve the palm of the hands, occur during the hot season in areas with presence of *Aedes* spp. mosquitoes.

### Declaration of interests

No competing interests.

### Authors' statement

The authors declare they do not have any conflict of interest, they received written informed consent from the patients, and all the work has been done in complete transparency.

### Contributors

MLT cared for the patients, and GR supervised and wrote the report.

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**Fig. 1.** Manifestations of chikungunya skin rash. Skin rash on patient's leg.



**Fig. 2.** Manifestations of chikungunya skin rash. Palm involvement on the hand of the 21-year-old man.



**Fig. 3.** Manifestations of chikungunya skin rash. Palm involvement of the 15-year-old girl.

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