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CLINICAL REASONING: CASE REPORT
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Chikungunya case cluster with nonspecific symptoms: implications for primary care in Switzerland

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Summary

BACKGROUND: Early clinical presentation of chikungunya fever and other arbovirus infections is often nonspecific, potentially delaying diagnosis, particularly in settings where these diseases are less frequently considered. Competent vectors are expanding in Switzerland, increasing the risk of autochthonous arbovirus transmission.

CASE SERIES: We report seven cases in a group of travellers returning from Kenya in summer 2025. All patients presented with fever, arthralgia affecting the small joints of the hands and feet, nausea, diarrhoea, and rash. Additional symptoms included generalised lymphadenopathy and peripheral oedema. Initial diagnostic tests were inconclusive, with negative results on rapid diagnostic tests for chikungunya antibodies, dengue antibodies, and malaria antigen. The definitive diagnosis was established after 35 days following the emergence of chikungunya IgG and IgM antibodies.

DISCUSSION: The presentation resembled a nonspecific febrile illness. Repeated, appropriately timed laboratory testing was necessary to establish the diagnosis. Early diagnostic results may be misleading, particularly when testing methods are not selected appropriately for the stage of the disease. With competent mosquito vectors established in Switzerland, imported cases present a risk of local transmission. Severe infections and persistent joint pain may lead to long-term disability.

CONCLUSION: Primary care doctors should consider chikungunya fever in returning travellers and, during the mosquito-active season, in non-travellers in areas with established competent vectors. Patients may present with symptoms ranging from nonspecific febrile illness to more typical manifestations of chikungunya, including fever, arthralgia of the small joints, and rash. Appropriate test selection, timing, and repeated testing when indicated are essential for accurate diagnosis, management, and documentation of the disease.

Introduction

Chikungunya fever (CHIKF) is a mosquito-borne viral infection that has become endemic in tropical and subtropical regions worldwide. The disease is caused by the chikungunya virus, an alphavirus of the *Togaviridae* family, and is transmitted by mosquitoes of the *Aedes* genus [1]. The incubation period is 2–12 days [2]. Common symptoms include fever (reported in approximately 90% of patients), arthralgia affecting the small joints of the hands and feet (reported in approximately 95% of patients and having a reported positive predictive value of more than 80%), and rash (reported in 40–50% of patients) [3]. About 15% of infections are asymptomatic [4]. Predominant laboratory findings include lymphopenia, leucopenia, and thrombopenia, though exact rates vary across studies [5]. Chikungunya virus is part of the arbovirus (arthropod-borne virus) group, which also includes dengue and Zika viruses. These diseases have expanded worldwide over recent decades, affecting regions far beyond their traditionally recognised endemic areas [6]. Travellers returning

from endemic or emerging regions often present with nonspecific symptoms, which can delay diagnosis unless clinicians maintain a high level of awareness and consider arboviral infections early [5].

In Switzerland, chikungunya fever is a notifiable disease. Clinicians and laboratories are required to report cases to the Federal Office of Public Health (FOPH) within 24 hours. As of 18 May 2026, 473 laboratory-confirmed cases of chikungunya virus infection had been reported nationally to the FOPH between 2007 and 2026, as of May 18, 2026. Of these cases, 278 (58.8%) were female and 195 (41.2%) were male, with a median age of 47 years. The most commonly reported symptoms were arthralgia (86%, n = 407), fever (77%, n = 364), myalgia (51%, n = 243), and rash (42%, n = 201). Of the 473 cases reported, 49 were hospitalised (10%). No autochthonous cases were reported during this period.

As a competent vector of the chikungunya virus, *Aedes albopictus* is established in parts of Switzerland (figure 1), potentially enabling local transmission if the virus is introduced by viraemic individuals [2].

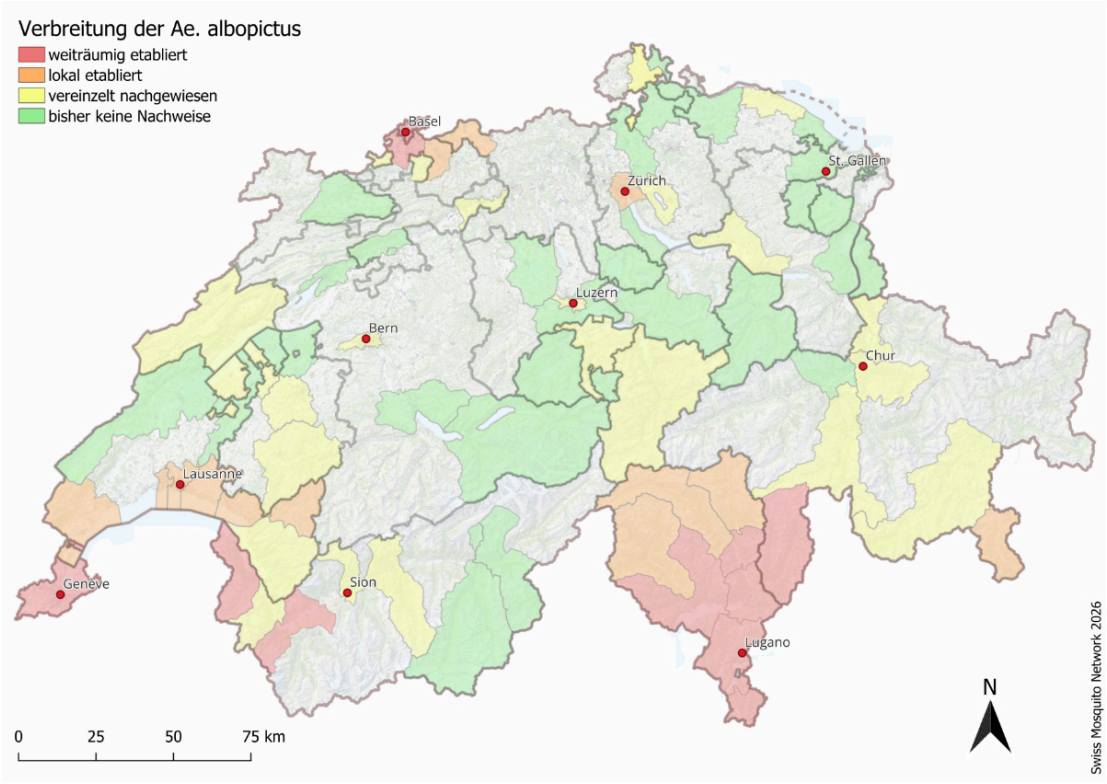


Figure 1: Establishment of Aedes albopictus in Switzerland, 2026. Red: widely established. Orange: locally established. Yellow: occasionally detected. Green: no findings to date. Map provided by Swiss Mosquito Network.

This case series aims to raise awareness of chikungunya fever among clinicians, including primary care physicians, who evaluate patients with nonspecific febrile illnesses in non-endemic settings where competent vectors are present, thereby facilitating timely diagnosis and helping prevent autochthonous transmission.

Case series

This report details a cluster of chikungunya fever cases in two families returning from Kenya in summer 2025. Seven out of ten individuals (four children, aged 5–9 years, and three adults, aged 40–44 years) who travelled to Lamu Island, Kenya, presented with similar symptoms (table 1).

Table 1: Clinical presentation of symptoms in the 7 patients of the chikungunya cluster.

Patient	Age group, sex	Arrival date	First symptoms	F.	A.	L.	R.	N.	D.	T.	Other
1	Child, female	01.07.2025	08.07.2025	x	x		x	x	x		
2	Adult, female	01.07.2025	09.07.2025	x	x	x	x	x	x	x	Bilateral lower extremity oedema., subsequently unilateral. Serology: chikungunya virus IgG and IgM positive
3	Child, female	01.07.2025	16.07.2025	x	x		x		x		Fatigue, weight loss
4	Adult, male	07.07.2025	16.07.2025	x	x		x	x	x	x	
5	Child, male	07.07.2025	18.07.2025	x	x		x	x	x		
6	Adult, female	07.07.2025	19.07.2025	x	x	x	x	x	x	x	Serology: chikungunya virus IgM positive, IgG strongly positive; O'nyong-nyong virus IgM/IgG positive
7	Child, male	07.07.2025	21.07.2025	x	x		x	x	x		

Abbreviations: F.: fever; A.: arthralgia; L.: lymphadenopathy; R.: rash; N.: nausea/vomiting; D.: diarrhoea; T.: telogen effluvium

Vaccinations were up to date in accordance with Swiss travel recommendations, including vaccination against yellow fever [7]. None of the travellers had received a chikungunya virus vaccine. Malaria chemoprophylaxis was taken by some of the travellers.

Upon arrival, the travellers were informed by local residents that there were numerous cases of febrile illness with symptoms suggestive of malaria or dengue virus infection; however, no specific diagnosis had been confirmed.

The case of patient 2 is described in further detail below, as the diagnostic work-up was the most thorough.

Patient 2

An adult female presented with fever, symmetrical peripheral polyarthralgia involving the hands and feet, and nausea (figure 2). Symptoms developed after she had spent eight days in Kenya and one day after the onset of symptoms in the first group member.

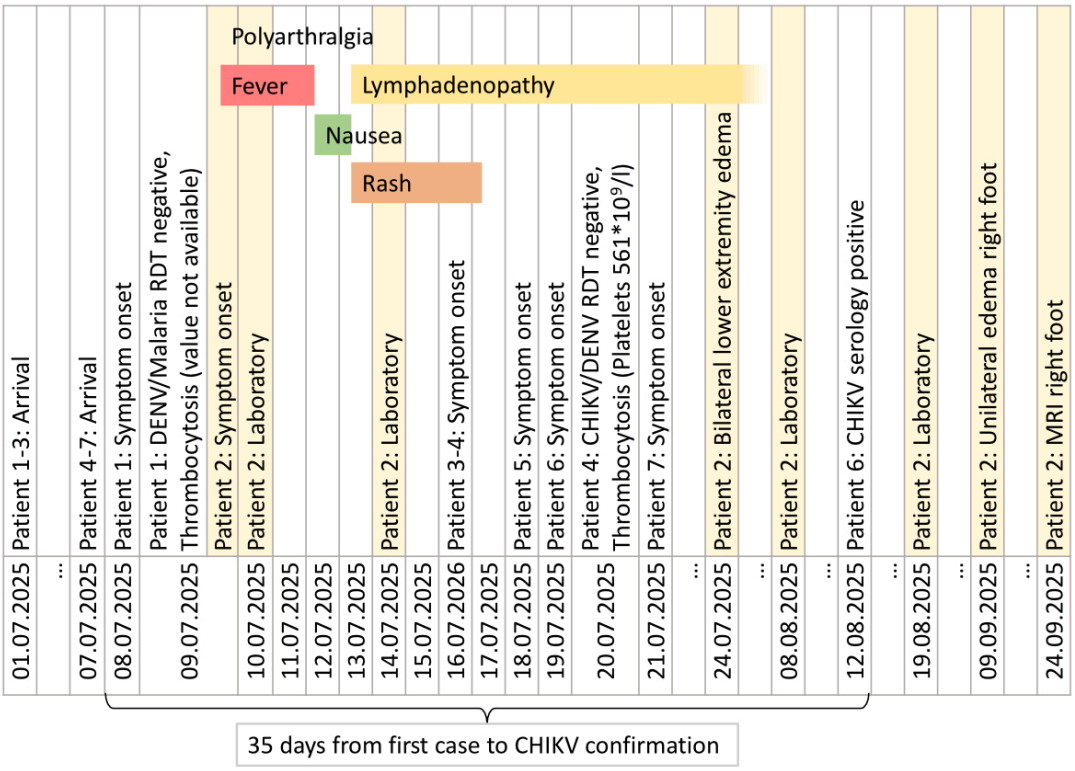


Figure 2: Timeline (patient 2 is represented by horizontal bars and yellow cells), including pathogen testing in other patients. Laboratory test results are listed in table 2. Abbreviations: MRI: magnetic resonance imaging. RDT: rapid diagnostic test.

There were no focal symptoms, rash, or haemorrhagic manifestations at initial presentation. Differential diagnoses included malaria, arboviral infections, and typhoid fever.

Physical examination was unremarkable except for an elevated body temperature. Initial rapid diagnostic tests for chikungunya virus (immunoglobulin G (IgG)/immunoglobulin M (IgM)), dengue virus (IgG/IgM), and malaria (Plasmodium falciparum HRP-2 antigen) were negative (table 2). Laboratory findings revealed thrombocytosis (536 × 10^9/l) with normal haemoglobin levels (12.7 g/dl) and a normal white blood cell count (WBC) (4.18 × 10^9/l).

Table 2: Laboratory test results for patient 2.

Date	Reference values	10.07.2025	14.07.2025	08.08.2025	19.08.2025
White blood cell count [10^9/l]	4–10	4.18	3.6	6.8	
Lymphocytes [10^9/l]	1.3–4.0	0.69	1.2	1.9	
Haemoglobin [g/dl]	12–16	12.7	9.9	13.7	
Platelets [10^9/l]	150–450	536	141	286	
Chikungunya virus IgG/IgM RDT	Negative	Negative	Negative		
Dengue virus IgG/IgM RDT	Negative	Negative	Positive		
Malaria Plasmodium falciparum HRP-II Ag RDT	Negative	Negative			
Chikungunya virus IgG titre	< 1:10				≥ 1:10
Chikungunya virus IgM titre	< 1:10				≥ 1:10

Abbreviations: Ag: antigen; IgG: immunoglobulin G; IgM: immunoglobulin M; RDT: rapid diagnostic test.

Symptomatic treatment with nonsteroidal anti-inflammatory drugs (NSAIDs) was initiated after dengue virus was excluded, and the patient was monitored clinically.

Five days after symptom onset, chikungunya virus and dengue virus antibody rapid diagnostic tests were repeated due to the development of a maculopapular rash (figure 3, A and B), persistent arthralgia, and lymphadenopathy in the posterior cervical (figure 3, C) and inguinal regions. The test showed a weakly positive result for dengue virus IgG antibodies (table 2). Laboratory tests revealed thrombocytopenia (141 × 10^9/l) and anaemia, with a haemoglobin level of 9.9 g/dl. WBC had decreased to 3.6 × 10^9/l. NSAID therapy was stopped.

Subsequent testing was performed after the patient returned to Switzerland. Serological testing revealed chikungunya virus IgG (titre ≥1:10, reference <1:10) and IgM (titre ≥1:10, reference <1:10) antibodies, confirming the diagnosis (table 2). The interval between symptom onset in the first case (08 July 2025) and serological confirmation of chikungunya virus antibodies (12 August 2025) was 35 days (figure 2).

Symptoms were managed by resuming NSAID therapy. Bilateral lower extremity oedema occurred 15 days after the onset of symptoms. Two months after disease onset, unilateral oedema of the right foot and ankle recurred (figure 3, D). Joint pain persisted for over 6 months, with intermittent flare-ups affecting the hands and feet for up to 10 months after infection. MRI of the right foot, performed due to localised pain, showed bone marrow oedema in the midfoot. Three months after infection, the patient reported temporary hair loss, which was interpreted as telogen effluvium.

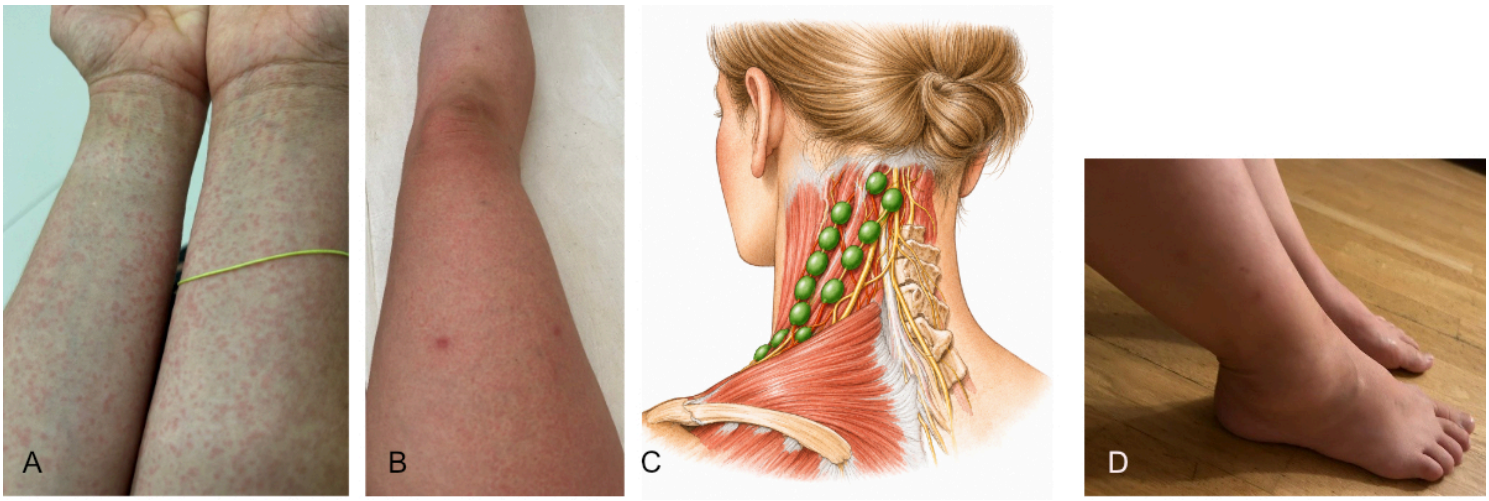


Figure 3: A and B: Maculopapular rash in patient 2 (day 5 after onset). C: Posterior cervical lymphadenopathy; image generated with ChatGPT (OpenAI; accessed 28 July 2026) using the prompt "medical illustration of a woman with posterior cervical lymphadenopathy". D: Unilateral oedema of the right foot and ankle in patient 2 (day 62).

Case series conclusion

Blood serology to confirm chikungunya virus infection after return to Switzerland was performed in patients 2 and 6. Given the similarity of their symptoms and the temporal relationship between the cases, chikungunya fever was considered the most probable diagnosis for the remaining patients.

Discussion

This case cluster highlights the diagnostic challenges associated with fever with nonspecific symptoms in settings where arboviruses are endemic or emerging. Chikungunya fever should be considered not only in patients returning from regions where arboviruses are endemic but also, during the mosquito-active season, in patients with compatible symptoms (i.e. fever, arthralgia affecting the small joints of the hands and feet, and rash [3]) in regions with established *Aedes albopictus* populations. However, early symptoms may be misleading, and laboratory confirmation may be delayed. Appropriately timed follow-up testing is essential to avoid missed diagnoses and reduce the risk of autochthonous transmission in non-endemic settings. Clinicians should be aware of the growing relevance and socioeconomic impact of arboviral infections.

In the group of travellers described, chikungunya virus was included in the differential diagnosis, but initial rapid diagnostic tests were negative. The laboratory abnormalities were diagnostically nonspecific. A definitive diagnosis was established only after serological confirmation of chikungunya virus antibodies, while other relevant travel-associated infectious diseases, including malaria, were excluded. This illustrates the need for appropriately timed and case-specific repeat testing, as outlined in Figure 4. The limitations of rapid diagnostic tests, particularly in the early stages of disease, as well as cross-reactivity in serological assays, further complicate accurate diagnosis [8].

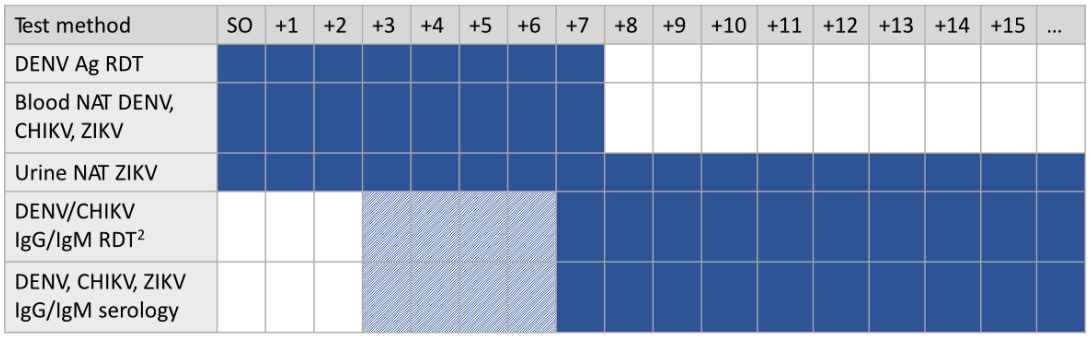


Figure 4: Recommended diagnostic approach for suspected chikungunya virus, dengue virus or Zika virus infection, according to the number of days after symptom onset. Adapted from [2], with antibody rapid diagnostic tests (row 4) added from [8]. Filled cells indicate the time window during which a given test method is recommended for detecting the respective infection(s). Hatched cells (days 3–6) indicate the interval during which detectability depends on the pathogen [8]. Abbreviations: Ag: antigen. CHIKV: chikungunya virus. DENV: dengue virus. IgG: immunoglobulin G. IgM: immunoglobulin M. NAT: nucleic acid testing. RDT: rapid diagnostic test. SO: symptom onset. ZIKV: Zika virus.

The temporal course of chikungunya virus infection should also inform measures to prevent mosquito bites among returning travellers. Viraemia is generally considered to be of short duration (2–10 days) and has been reported from 3 days before to 8 days after fever onset [2, 4, 5]. For dengue virus and Zika virus, the viraemic period is similar, although Zika virus may persist longer in certain body fluids [2]. For all arboviruses, human-to-mosquito transmission by asymptomatic individuals is possible [4, 5].

A laboratory finding that has not been described in the literature was initial thrombocytosis in all three patients who underwent blood analyses, followed, in patient 2, by a decrease in thrombocyte count within 5 days (table 2). This finding warrants further study.

Numerous reports of comparable cases on the island during the same period suggest that there was an ongoing chikungunya fever epidemic. Shortly before, in July 2025, an outbreak of chikungunya virus was reported in Mombasa, Kenya [9]. Anecdotally, because of limited resources and a lack of therapeutic consequences, a definitive diagnosis was not pursued among local residents on Lamu Island. Therefore, the symptoms reported by our patients could not be reliably matched with those of confirmed cases.

Two patients presented with painful posterior cervical lymphadenopathy, which has rarely been described in chikungunya virus infection [10]. This finding led to the inclusion of O'nyong-nyong virus (ONNV) infection in the differential diagnosis. O'nyong-nyong virus belongs to the *Togaviridae* family, as does chikungunya virus [11]. The average incubation period is 8 days. Typical symptoms include fever, rash, myalgia, and arthralgia. Consistent with the cases described here, cervical lymphadenopathy has been described as a characteristic symptom of O'nyong-nyong virus infection [11]. O'nyong-nyong virus IgG and IgM antibodies were detected by serological testing of one patient; however, chikungunya virus IgG showed a much stronger response. Therefore, we assume that the positive O'nyong-nyong virus result was due to alphavirus cross-reactivity, particularly as chikungunya virus is more likely to yield a false-positive O'nyong-nyong virus result than vice versa [12]. The occurrence of cervical lymphadenopathy in chikungunya virus infection warrants further study.

Cases of chikungunya fever are increasing worldwide, yet clinical awareness in non-endemic settings remains limited [5]. Autochthonous infections may occur in regions with competent vectors during periods of suitable temperatures. Numerous local outbreaks have been reported in France (479 autochthonous cases by 15 September 2025) and Italy (205 autochthonous cases by 15 September 2025) [9].

Aedes albopictus mosquitoes are the main competent vectors in Europe. Recent findings by Tegar et al. indicate that chikungunya virus transmission is possible at lower temperatures than previously recognised, starting at 13.8 °C [13].

Aedes albopictus populations are expanding rapidly across Switzerland, with well-established populations in southern Switzerland and the Basel region (Figure 1). In these areas, the mosquito activity season typically extends from May to October. In 2025, the FOPH released a national management plan addressing dengue virus, chikungunya virus and Zika virus, comprising measures for vector surveillance and control, diagnostics and case management, communication, and event and crisis management [2]. The plan supports cantons in developing local management strategies.

Delayed or missed diagnoses may have important clinical and socioeconomic consequences, such as repeated consultations and inadequately treated symptoms, while nonspecific presentations may lead to extensive investigations and unnecessary testing. Chronic sequelae, including arthralgia and fatigue, are common and may persist for years, contributing to reduced functional capacity and a delayed return to work [14]. Laboratory confirmation is also relevant to social insurance processes, as it provides objective evidence of work incapacity and supports benefit claims.

Vaccines against chikungunya virus have recently become available, with the first vaccine licensed in Switzerland in April 2026 (Vimkunya®). The Swiss Expert Committee for Travel Medicine recommends Vimkunya® for persons aged 12 years and older travelling to an area with a chikungunya outbreak and for laboratory personnel with potential occupational exposure to chikungunya virus. Furthermore, vaccination may be recommended for persons aged 12 years and older travelling or moving to an area with an elevated risk of chikungunya if they plan an extended stay or repeated stays (e.g. a cumulative duration of more than one month). During pregnancy and breastfeeding, an individual risk-benefit assessment is recommended [15].

Notes

Informed consent: Written informed consent was obtained from the patients (or the children's parents) for the publication of the case report and the accompanying images.

Use of AI: Figure 3C was generated using ChatGPT, which was also used selectively to improve the wording and language of individual passages. No other generative artificial intelligence (AI) tools or AI-assisted technologies were used in the preparation of this manuscript.

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Potential competing interests

All authors have completed and submitted the International Committee of Medical Journal Editors form for disclosure of potential conflicts of interest. No potential conflict of interest related to the content of this manuscript was disclosed.

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