



Case Report

Imported Chikungunya Fever in Madrid[☆]



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ABSTRACT

Chikungunya fever is a mosquito-transmitted viral disease that causes fever, rash and musculoskeletal complaints. The latest may persist for several months, or even years or developed a relapsing course, that deserve an adequate treatment.

Due to the large outbreak declared in the Caribbean in 2013, imported cases of Chikungunya as well as the risk of autochthonous transmission in case of available vectors have increased in non-endemic countries, like Spain. We described four cases of Chikungunya treated in our clinic.

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Fiebre chikungunya importada en Madrid

RESUMEN

La fiebre chikungunya es una infección viral, transmitida por mosquitos, que cursa con fiebre, rash y síntomas musculoesqueléticos que pueden persistir meses, incluso años, de una forma crónica o recidivante precisando adecuado tratamiento.

La extensa epidemia declarada en el Caribe en 2013 ha provocado el aumento de los casos importados en los países no endémicos, así como del riesgo de transmisión autóctona en aquellas zonas donde se encuentran vectores, como es el caso de España. Describimos 4 casos de chikungunya atendidos en nuestras consultas.

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Introduction

Chikungunya fever, first reported in the 1950s, is a viral disease produced by an alphavirus. Until recently, because of its geographic distribution, it was considered a tropical disease. However, the virus has mutated and become adapted to a vector, *Aedes albopictus*, the tiger mosquito, that is more widely distributed than its classical vector, *Aedes aegypti*,¹ and is found in regions including the Spanish Mediterranean basin. The area of autochthonous transmission now encompasses Africa, Asia, Europe (Italy and France) and, since

the epidemic involving more than 1 000 000 cases declared in the Caribbean at the end of 2013, the American continent, as well.²

Case Reports

Between July and September 2014, 3 patients from primary care and 1 from the emergency department were referred to our rheumatology department after several weeks of arthralgia or arthritis. The epidemiologic factor that they shared was a trip to the Dominican Republic in the weeks prior to onset. All 4 developed fever, rash and musculoskeletal symptoms, which began during their stay in Santo Domingo in 3 and a few days after returning to Spain in the fourth. They presented with severe arthralgia, which was accompanied by polyarthritis suggestive of rheumatoid arthritis only in the patient of advanced age, a factor that has been related to the persistence of arthropathy.^{3,4} The diagnosis was confirmed by serological tests. One of the patients tested negative for IgM and positive for IgG, a finding explained by the interval of over

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Table 1
Patient Characteristics.

Age, years	Sex	Symptoms	Serologic findings chikungunya	Serologic findings dengue	RF/Anti-CCP	ANA	Treatment	Outcome
62	F	Fever Rash Arthritis	IgM+ IgG+	IgM– IgG+	Neg/Neg	Neg	NSAID Corticosteroids	Remission (4 m)
29	F	Fever Rash Arthralgia	IgM+ IgG+	IgM– IgG+	Neg/Neg	Neg	NSAID Corticosteroids	Recurrence remission (4 m)
25	F	Fever Rash Arthralgia	IgM– IgG+	IgM– IgG–	Neg/Neg	Neg	NSAID Corticosteroids	Remission (2 m)
26	M	Fever Rash Arthralgia	IgM+ IgG+	IgM– IgG+	Neg/Neg	Neg	NSAID Corticosteroids	Remission (1 m)

ANA, antinuclear antibodies; Anti-CCP, anti-cyclic citrullinated peptide antibodies; F, female; M, male; Neg, negative; NSAID, nonsteroidal anti-inflammatory drug; RF, rheumatoid factor.

2 months between clinical onset and the analyses. The dengue serology revealed signs of previous contact in the 3 Dominican patients. Rheumatoid factor (RF) and anti-cyclic citrullinated peptide (CCP) antibodies were negative in all the patients. In 1 case, antinuclear antibodies were positive but later became negative, a circumstance reported in numerous infections. There was no radiological evidence of joint damage. When they first came to our department, all the patients had already received a nonsteroidal anti-inflammatory drug and corticosteroids, a fact that reflects the severity of the symptoms. Only the woman with polyarthritis required maintenance of prednisone, which was tapered over several weeks. In no case did the disease last more than 4 weeks. There was 1 recurrence, with a subsequent positive response (Table 1).

Discussion

Chikungunya fever presents with nonspecific clinical features, often including joint pain. The recent trip was the decisive epidemiologic factor for the diagnosis in our patients, as occurred in the 10 patients reported in Catalonia, Spain, in July 2014⁵ and the 79 cases declared up to November 2014 in the Community of Madrid (*Boletín de Información Epidemiológica de la Consejería de Sanidad* [Bulletin of Epidemiological Information of the Madrid Health Administration]). However, we must keep in mind the possibility of autochthonous transmission in zones inhabited by the tiger mosquito (in Spain, Catalonia, the Valencian Community and the Region of Murcia),⁶ should an individual carrying the chikungunya virus come to these regions.

All our patients tested negative for RF and anti-CCP antibodies, contrasting with previously reported rates of seropositivity of 20%–30%.^{7,8} Their conditions resolved within a maximum of 16 weeks. However, the transition to chronic joint involvement is a well-known complication, sometimes in the form of nonspecific arthralgia, soft tissue disease or an inflammatory process suggestive of rheumatoid arthritis, spondyloarthritis or undifferentiated arthritis,^{8–10} which have been found to respond well to treatment with synthetic or biologic disease-modifying antirheumatic drugs.⁸ These are the patients that benefit the most from early referral to a rheumatology department, as occurred in our series, making it possible to take advantage of a hypothetical therapeutic window.

Conclusions

Chikungunya can be included in the differential diagnosis not only of travelers from regions in which the virus is endemic, but of any individual with the typical signs and symptoms living in a region where transmission is viable. As rheumatologists, we must be knowledgeable about the situation in order to

contribute to controlling the possible expansion of this virus, which is a notifiable disease, and to offer patients optimal specialized care.

Ethical Disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that no patient data appear in this article.

Right to privacy and informed consent. The authors declare that no patient data appear in this article.

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Conflicts of Interest

The authors declare they have no conflicts of interest.

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