Reactivation of Chagas-Mazza disease during treatment with infliximab*

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Dear Editor,

Chagas-Mazza disease is a zoonosis caused by *Trypanosoma cruzi*, a species of parasitic euglenoid protozoan. It affects 21 countries in the Americas, where 7 to 10 million people are infected, 8 out of 100,000 individuals/year, and it has a mortality rate of 12,000 individuals/year. The main routes of transmission are exposure to vectors (*Triatoma infestans*), transfusion (second in frequency), placental and oral transmission. Given increasing migration and organ and blood product donations, this disease has become global, affecting Europe and North America. [1]

Chagas disease presents three well -defined clinical phases. The acute phase develops after an incubation phase that lasts from 4 to 10 days. The acute stage can be asymptomatic or present with fever, macular or inflammatory lesions in the inoculation site (chagoma), edema, palpebral unilateral induration (Romaña's sign) or myocarditis. Of all infected people, only 1 to 2 % is diagnosed during this phase. The indeterminate chronic phase is characterized by the absence of symptoms and by standard laboratory test findings. Thirty percent of patients can remain in this phase during their entire life, while the remaining 70% evolve into the chronic or symptomatic phase, with heart or esophagus involvement. Reactivation may occur in immunosuppressed patients, especially in those patients that present an alteration of cell mediated immunity. It can be asymptomatic or manifest with neurologic, cardiac or cutaneous changes.[2]

PCR technique amplifies *in vivo* fragments of the parasite's DNA. In immunosuppressed patients, PCR test is useful for the diagnosis and control of the disease, given the fact that ELISA serology can be negative in some patients. It also allows to make early diagnosis of the reactivation of the disease, what is important because it enables immediate action to stop parasite multiplication, to avoid the suspension of treatments based on immunomodulation, and to avoid further complications of the disease.

We report a clinical case of a psoriatic erythroderma patient treated with infliximab, with subsequent reactivation of previously unknown Chagas-Mazza disease.

A 57-year-old male patient born in Buenos Aires, Argentina, was admitted to hospital with psoriatic erythroderma. During clinical examination, he was afebrile and presented erythema and thick scaling of 90% of the body, including face and soles (Figure 1). Nikolsky's sign was negative and the patient showed no mucous membrane involvement. Laboratory tests showed anemia (hemoglobin 7.9 g/dl) and renal failure (creatinine 7.9%). Histopathological examination of the skin showed regular acanthosis, suprapapillary thinning, absence of granular layer and hyperparakeratosis with neutrophilic microabscesses in the epidermis, and congestive blood vessels in dermis. Chest radiograph showed no pathological findings. Tuberculin tests and serology for hepatitis B and C, syphilis and HIV were negative. ELISA and polymerase chain reaction (PCR) tests for Chagas were positive but non-quantifiable.

We started treatment with infliximab 5mg/kg/dose on weeks 0, 2 and 6. Resolution of the erythroderma was complete on the third infusion. Controls for Chagas through PCR were reiterated weekly. After the third infusion, the patient presented a Chagas relapse with a higher quantifiable PCR (57.4 eq. p/ml, positive and quantifiable: equal or greater than 1.5 eq. p. /ml). He was given benznidazole for 45 days and controls were restated weekly. One month after the beginning of the treatment, the patient's PCR result was negative.

To our knowledge, and based on our literature review, this is the first report of reactivation of Chagas-Mazza disease after the use of infliximab or other biologics. TNF-α favors the activation of macrophages that phagocyte the parasites in the acute phase, and the production of immunoglobulin responsible for the control of the sub-clinical infection and the parasite reactivation in the chronic

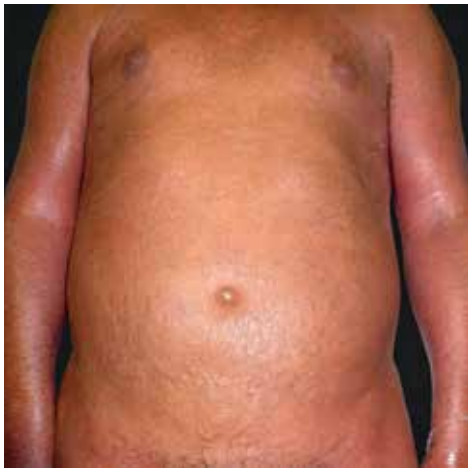

Figure 1: Erythema and thick scaling of 90% of the body, including face and soles

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phase.[3,4] This explains why anti-TNF could favor such a relapse. This case should warn us about the possibility of recurrence of this zoonosis during treatment with anti-TNF, and about the importance of performing the required serology before its use. When recurrence is confirmed, controls and accurate treatments should be implemented. ❑

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