



# RICKETTSIA CONORII INFECTION

## RARE FORM OF CONJUNCTIVAL TRANSMISSION



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### INTRODUCTION

**Mediterranean spotted fever (MSF)** is a tick-borne rickettsial disease, endemic in Portugal. It is caused by *Rickettsia conorii* and clinically characterized by a vasculitic process with the classical clinical triad: **fever, rash and lesion at the site of tick bite.**

It is accidentally transmitted to the human by its main vector, the *Rhipicephalus sanguineus* arthropod. Usually the disease develops after an infected tick bite but atypical forms of transmission such as mucosal contamination or inhalation have also been reported.

### CASE PRESENTATION

15-year-old  
Healthy male

**Conjunctival splashes after crushing blood-engorged ticks from his dog**

Right eye pain  
Conjunctival hyperemia  
Ocular purulent exudate  
Palpebral edema

**Fever, myalgias, severe headache, abdominal pain and vomiting**

**On observation:**

Multiple cervical adenopathies  
NO exanthema or hepatosplenomegaly

Six days later

Eight days later



**Purulent conjunctivitis  
Preseptal cellulitis**

Treatment: Amoxicillin clavulanate

Hemoglobin 14.1 g/dL  
WBC 5700/ $\mu$ L  
Platelets 183000/ $\mu$ L  
TP 16.1 sec  
INR 1.41  
CRP 49.6 mg/L.

***R. Conorii* Serology (IFA titers)**

Acute	At 3 weeks
IgM < 32	IgM = 64
IgG < 64	IgG = 128

Blood polymerase chain reaction negative for *Rickettsia*

**Mediterranean spotted fever  
Conjunctival transmission  
Doxycilin for 7 days**

**Seroconversion for  
*Rickettsia conorii***

### DISCUSSION

Although the conjunctival transmission of *Rickettsia conorii* has been reported, it is extremely rare on the medical scientific literature. In fact, transmission can occur from infective tick tissues or feces by **conjunctival contamination, transcutaneous transmission or inhalation** (e.g. after crushing ticks).

The **onset of human symptoms usually occurs after**

**seven days (range 2-14 days).** In this case, a severe unilateral conjunctivitis with preseptal cellulitis suggests that transmission occurred by conjunctival route. The optimal time to obtain a convalescent antibody titer is 14 to 21 days after the onset of symptoms and in this case **seroconversion for *Rickettsia conorii* allows us to assume that this was the route of infection.**

#### BIBLIOGRAPHY: