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

**Six days later**

- Hemoglobin 14.1 g/dL
- WBC 5700/μL
- Platelets 183000/μL
- TP 16.1 sec
- INR 1.41
- CRP 49.6 mg/L.

- Purulent conjunctivitis
- Preseptal cellulitis
- Treatment: Amoxicillin clavulanate

**Eight days later**

- Fever, myalgias, severe headache, abdominal pain and vomiting
- On observation: Multiple cervical adenopathies NO exanthema or hepatosplenomegaly

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

<table>
<thead>
<tr>
<th></th>
<th>Acute</th>
<th>At 3 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>IgM</td>
<td>&lt; 32</td>
<td>IgM = 64</td>
</tr>
<tr>
<td>IgG</td>
<td>&lt; 64</td>
<td>IgG = 128</td>
</tr>
</tbody>
</table>

Blood polimerase chain reaction negative for *Rickettsia*

Seroconversion for *Rickettsia conorii*

- Mediterranean spotted fever
- Conjunctival transmission
- Doxycyclin for 7 days

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.