

Epidemiological And Clinical Features Of Rickettsiosis

Fatma Hammami, Makram Koubaa, Amal Chakroun, Khaoula Rekik, Fatma Smaoui, Emna Elleuch, Chakib Marrakchi,
Mounir Ben Jemaa
Infectious Diseases Department, Hedi Chaker University Hospital, University of Sfax, Tunisia

Background

Rickettsiosis is a common tick-borne disease in tropical regions. The treatment is usually delivered in front of high index of suspicion, since the diagnosis confirmation might be delayed. We aimed to study the epidemiological and clinical features of rickettsiosis in our region.

Methods

We conducted a retrospective study including all patients hospitalized in the infectious diseases and pediatric departments for confirmed rickettsiosis between 1995 and 2017. The diagnosis was confirmed by serological tests (seroconversion) or a positive polymerase chain reaction assays for *Rickettsia*.

Results

There were 424 patients among whom 232 (54.7%) were male. The mean age was 39 ± 18 years. There were 62 children aged ≤ 18 years (14.6%). During six months period, from May to October, 360 patients were diagnosed with the disease (84.9%). In total, 334 patients had a close contact with animals (78.7%). The revealing symptoms were fever (100%), arthralgia (77.6%), cephalalgia (72.4%) and vomiting (44.6%). Physical examination showed maculopapular skin rash in 350 cases (82.5%), inoculation eschar in 105 cases (24.8%) and meningeal syndrome in 43 cases (10.1%). There were 43 cases (10.1%) of meningitis, 6 cases of meningoencephalitis (1.4%) and 5 cases of myocarditis (1.2%). Laboratory investigations revealed liver cytolysis (66%) and thrombocytopenia (57.5%). Doxycycline was used in 288 cases (68%). Seroconversions in 113 cases (26.6%) and macrolide in 23 cases (5.4%). The mean duration of antibiotics was 8 ± 4 days. The disease resolution was immediate in 418 cases (98.6%), four patients (1%) were dead and 2 patients (0.4%) were transferred to intensive care unit.

Conclusion

Rickettsiosis is not a rare disease. Careful clinical and laboratory investigations guide the diagnosis process, which is confirmed with serological tests.

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Results

- **Total:** 424 patients
 - **Gender:** 232 males: 54.7%
 - **Mean age:** 39 ± 18 years.
- There were 62 children aged ≤ 18 years: 14.6%
- **Close contact with animals:** 334 patients: 78.7%.
 - **Revealing symptoms:**
- Arthralgia was noted in 77.6% of the cases (Table 1).

Table 1: The revealing symptoms of cases of rickettsiosis

	Number	Percentage (%)
Fever	424	100
Arthralgia	329	77.6
Cephalalgia	307	72.4
Vomiting	190	44.8

- During six months period, from May to October, 360 patients were diagnosed with the disease: 84.9%.
- **Physical examination:** Maculopapular skin rash was noted 82.5% of the cases (Table 2).

Table 2: Physical examination signs among patients with rickettsiosis

	Number	Percentage (%)
Maculopapular skin rash	350	82.5
Inoculation eschar	105	24.8
Meningeal syndrome	43	10.1

- **Laboratory investigations:**
 - ▶ Liver cytolysis: 254: 60%
 - ▶ Thrombocytopenia: 424: 57.5%.

• Clinical presentation:

There were 43 cases of meningitis (Table 3).

Table 3: Clinical presentation of cases of rickettsiosis

	Number	Percentage (%)
Méningitis	43	10.1
Meningoencephalitis	6	1.4
Myocarditis	5	1.2

• Treatment prescribed:

- ▶ Doxycycline: 288 cases: 68%
- ▶ Fluoroquinolones: 113 cases: 26.6%
- ▶ Macrolide: 23 cases: 5.4%.

• The mean duration of antibiotics: 8 ± 4 days.

• Disease evolution:

- ▶ Favourable: 418 cases: 98.6%.
- ▶ Death: 4 cases: 1%
- ▶ Transfer to intensive care unit: 2 cases: 0.4%

Conclusion

Rickettsiosis is not a rare disease. Careful clinical and laboratory investigations guide the diagnosis process, which is confirmed with serological tests.