Severe rickettsiosis: just to be thought

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INTRODUCTION & PURPOSE

- Rickettsiosis was considered as a benign disease for a long time. However, severe complications and fatalities may occur. Currently, few studies have assessed pronostic factors in rickettsial diseases.
- We aim to outline risk factors of severe rickettsisosis.

METHODS

- A retrospective study was performed in a department of Infectious Diseases between 1993 and 2016. All patients with confirmed rickettsiosis were enrolled.
- Diagnosis was confirmed by **immunofluorescence assay** (IFA) or **polymerase chain reaction** (PCR) or in **presence of compatible clinical symptoms in hot season**.
- We defined severe form as **any organ involvement** including neurological, renal, cardiac, splenic and or pancreatic involvement.
- We compared epidemiological, clinical and biological characteristics between patients with severe forms (SF) and non severe forms (Non SF) and subsequently we depicted risk factors of severe rickettsiosis.

RESULTS

- We included **336 cases** of confirmed rickettsiosis
- There were **73 patients (21,7%) with severe forms** which were mainly renal and neurological forms **(Figure 1).**

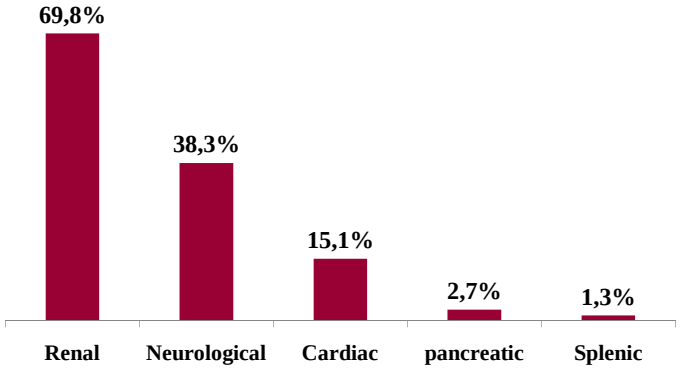

Figure 1: Main forms of severe rickettsiosis

- Patients with severe forms were significantly older and they had more comorbidities **(Table I)**.
- **Table II** summarized biological findings.

Table I : Clinical characteristics of patients with severe rickettsiosis

	SF	Non SF	P-value	OR
Age (Years)	49.2 ±17	40.6 ±16	< 0.001	**1.9**
Comorbidities (%)	36.4	23	0.03	**1.9**
Purpuric rash (%)	11	3	0.005	**3.9**
Splenomegaly (%)	9.7	3.8	0.04	**2.7**
Retinitis (%)	9.7	3.4	0.02	**3.1**

Table II : Laboratory findings in severe rickettsiosis

	SF	Non SF	P-value	OR
Thrombocytopenia* (%)	44.4	27.3	0.005	**2.1**
Leukocytosis (%)	36.1	21.9	0.014	**2.01**
Natremia (mmol/L)	132 ± 5,3	134 ± 4,4	0,002	**2.12**
Hypoalbuminemia (%)	34,8	7,4	0.001	**6.7**
Cholestasis	16,8 ± 8	14,8 ± 9	0,004	**2.13**

**** : < 100 000 E/mm³***

- Apyrexia was obtained within 3.4±2 days and 97.9% of patients were cured.
- Complications occurred in 3 patients with severe rickettsiosis (0.9%) and 1 patient died (0.3%) with multi-organ failure.
- **Table III** summarized therapeutic management of rickettsiosis.

Table III: Therapeutic management of rickettsiosis

	SF	Non SF	P-value	OR
Doxycycline (%)	51.4	66.2	0.02	**0.5**
Fluoroquinolone (%)	31.9	26.6	0.3	**-**
Intensive care need (%)	4.1	0.4	0.03	**11.2**

CONCLUSION

- Our study exhibited that clinical, biological and therapeutic factors were associated with severe rickettsiosis.
- In the lack of standardized definition of severe rickettsiosis, prognostic factors may vary among studies.
- We thought that early diagnosis and efficient management of rickettsial diseases remain crucial to improve patients' outcome.

No disclosure

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