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Background

Rickettsiosis, an acute febrile illness, is generally considered as a benign disease. However, severe cases were reported, among which acute renal failure (ARF) represented 13% to 18% of the cases. We aimed to study the clinical and evolutionary features of rickettsiosis complicated with ARF, when compared with all rickettsial infections.

Methods

We conducted a retrospective study including all patients hospitalized for rickettsiosis in the infectious diseases department between 1995 and 2018. The diagnosis was confirmed by serologies (seroconversion).

Results

- **Total:** 28 patients (6.4%) with ARF among 440 patients with rickettsiosis
- **Gender:** 19 males: 67.9%
- **Revealing symptoms:** Patients consulted for eruptive fever in 78.6% of the cases (Table 1).

- The mean creatinine levels were 158 $\mu\text{mol/L}$ [120-444 $\mu\text{mol/L}$].

- **Comparison of clinical characteristics:** Eschars were more frequently noted among patients with ARF ($p=0.008$) (Table 2).

- **Comparison of the disease evolution:** Death was significantly more frequent among cases with ARF ($p=0.011$) (Table 3)

Table 2: Comparison of clinical characteristics among rickettsial infections complicated with acute renal failure and all rickettsial infections

	RI with ARF	RI without ARF	p-value
Mean age \pm SD, years	53 \pm 16	38 \pm 17	< 0.001
Eschars, n (%)	13 (46.4)	98 (23.8)	0.008
Septic shock, n (%)	4 (14.3)	2 (0.5)	0.001
Retinitis, n (%)	3 (10.7)	6 (1.5)	0.015

RI: rickettsial infections, ARF: acute renal failure, SD: standard deviation, n: number, %: percentage

Table 3: Comparison of the disease evolution among rickettsial infections complicated with acute renal failure and all rickettsial infections

	RI with ARF	RI without ARF	p-value
Favorable, n (%)	24 (85.7)	410 (99.5)	<0.001
Complications, n (%)	3 (10.7)	1 (0.2)	0.001
Death, n (%)	2 (7.1)	1 (0.2)	0.011

RI: rickettsial infections, ARF: acute renal failure, n: number, %: percentage

Clinical presentation:

- ▶ Meningitis: 4 cases: 14.3%
- ▶ Meningoencephalitis: 2 cases: 7.1%.

Conclusion

Rickettsial infections complicated with ARF had a poor prognosis, especially among the elderly. Prompt empiric antibiotic therapy might improve the prognosis.

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Methods

We conducted a retrospective study including all patients hospitalized for rickettsiosis in the infectious diseases department between 1995 and 2018. The diagnosis was confirmed by serologies (seroconversion).

Results

Overall, we included 28 patients (6.4%) with ARF among 440 patients with rickettsiosis. There were 19 males (67.9%). Patients with ARF were significantly older (53.0 \pm 16.7 years, $p<0.001$). They consulted for eruptive fever (78.6%), febrile cephalalgia (13.7%) or isolated fever (10.7%). Arthralgia and vomiting were noted in 10.7% and 35.7% of the cases, respectively. There were 4 cases (14.3%) of meningitis and 2 cases (7.1%) of meningoencephalitis. The mean creatinine levels were 158 $\mu\text{mol/L}$ (120-444 $\mu\text{mol/L}$), in comparison with all rickettsial infections. Eschars were more frequently noted among patients with ARF (46.4% vs 23.8%, $p=0.008$). They were more frequently diagnosed with septic shock (14.3% vs 0.5%, $p=0.001$) and retinitis (10.7% vs 1.5%, $p=0.015$). Comparison of the disease evolution showed that death was significantly more frequent among patients with ARF (7.1% vs 0.2%, $p=0.011$). The mean length of hospital stay was significantly longer among patients with ARF (7.1 \pm 3.3 \pm 3 days, $p=0.011$) as to gender and the revealing symptoms, no significant difference was noted.

Conclusion

Rickettsial infections complicated with ARF had a poor prognosis, especially among the elderly. Prompt empiric antibiotic therapy might improve the prognosis.