

ACUTE RENAL FAILURE IN LEPTOSPIROSIS: ABOUT 79 CASES

Ouaddi F., Tazi I., Mabrouk K., El Khayat S., Zamd M., Medkouri G., Benghanem M., Ramdani B.

Service de Nephrology, Hemodialysis and Transplantation Unit – CHU Ibn Rochd – Casablanca

Dabo G., Badaoui L., Oulad Lahcen A., Sodqi M., Marih L., Chakib A., Marhoum El Filali K.

Infectious diseases Unit– CHU Ibn Rochd – Casablanca

Introduction

Leptospirosis is an anthrozoosis due to spiralled bacteria of the family of Leptospira. It's a worldwide distributed disease and a major public health problem in many countries. The renal involvement remains a major clinical concern because of the uncertain prognosis in the absence of proper management.

The aim of this study is:

- To analyse the clinical and biological features of patients with leptospirosis
- To describe the renal outcome and prognosis during leptospirosis

Methods

It was a retrospective study covering 6 years from January 2008 to December 2013. We included all suspected or confirmed cases of leptospirosis.

A case was defined as the presence of jaundice associated with thrombopenia and renal failure with or without a positive serology.

79 cases were retained and their clinical, biological and therapeutic parameters analysed as well as the renal and the patient outcome.

Results

Clinico-biological pattern

The mean age was 40,2 years (16-70) , with a male predominance and a sex ratio of 9:1. the notion of contact with rats was found in 40 cases (50,6%) and 36 patients (45.5%) had professional exposure.

clinical signs	Nb (%)	
Fiver	62 (78.5)	
Jaundice	74 (93.6)	
abdominal pain	25 (31.6)	
Diarrhoea	7 (8.8)	
Vomitting	20 (25.3)	
Muscles and joins pains	25 (31.6)	
Hémorragic syndrom	37 (46.8)	
Neurologic signs	13 (16.4)	
Respiratory signs	10 (12.6)	
Cardiac signs	4 (5)	
Diuresis	Conserved	58 (73.4)
	Oliiguric	11 (13.9)
	Anuric	10 (12.6)
Jaundice plus hemorragic syndrom	35 (44.3)	

Table I: signs and symptoms at admission

- The mean seric creatinin was 52.8 mg/l.
- The disease was confirmed using the martin & petit serologic test in 22 patients (27.8 %).
- The various biological anomalies are listed in table II,

Biologic signs	Nb	interpretation
ASAT	57	↗ (5.62 X N)
ALAT	56	↗ (3.22 X N)
Total bilirubine	54	↗ (21.09 X N)
Direct bilirubine	51	↗ (37.31 X N)
Platelet s <150 000	66	83.5%
WBC >10 000	70	88.6%
Hemoglobin <10	24	30.3%

Table II : biological features

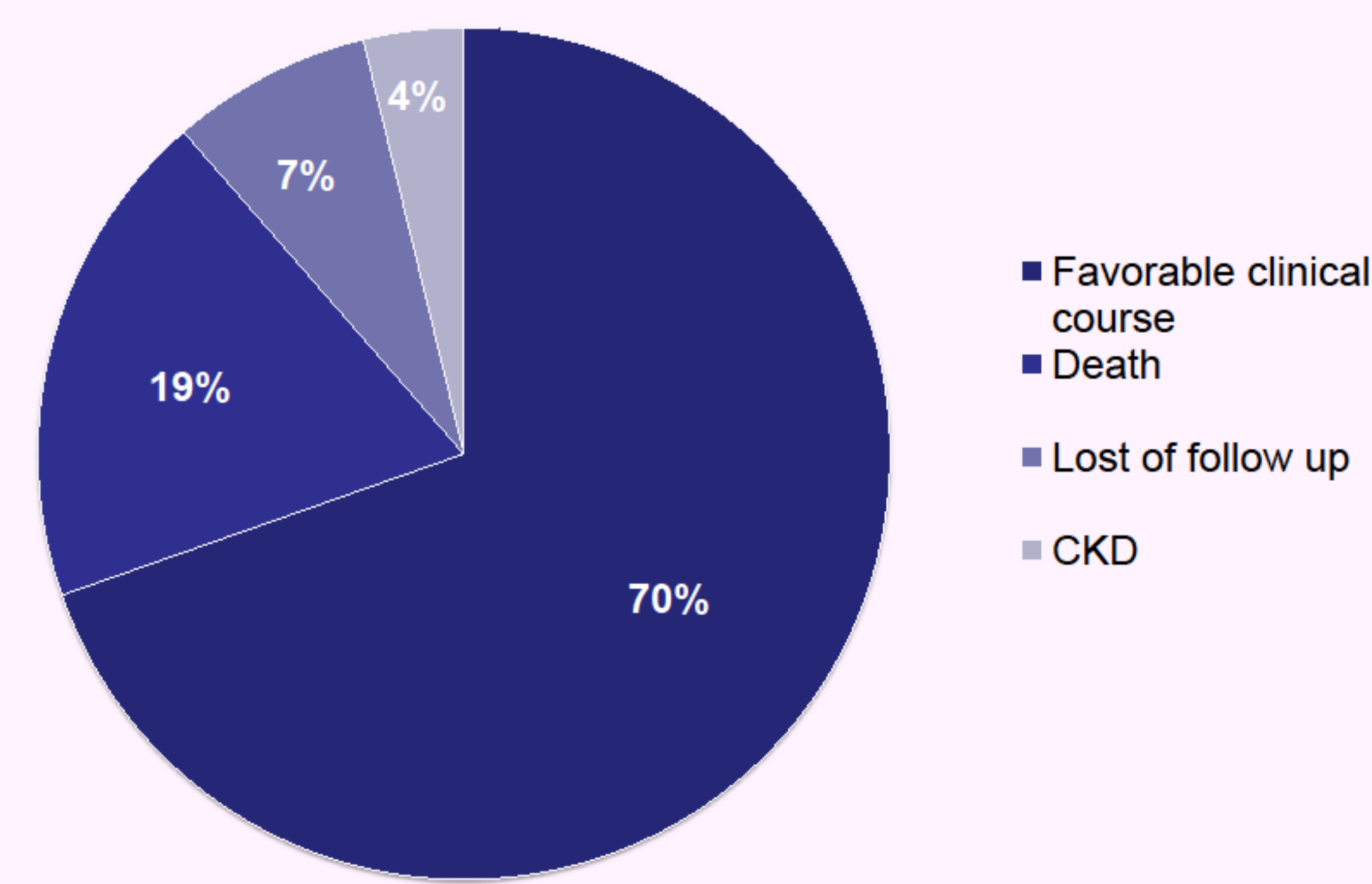
Treatment and evolution

- All patients received a standard antibiotherapy of various family
- 44% (35 cases) of patients was initially admitted in the intensive care unit.
- renal replacement therapy was required 17 patients (21.5%), with a mean of 2.8 sessions /patient.

Modality	Nb	%	
ATB	Peni A	43	54.4%
	Peni G	0	
	C3G	27	34.17%
	Cycline	2	2.5%
	Association	3	3.7%
Transfusion	Whole blood	7	8.8%
	Frozen platelet	15	18.9%
	No transfusion	52	65.8%
Rehydration	71	89.8%	

Table III : Treatment modalities

- Complete renal recovery in 55 case (69.6 %) and the mean serum creatinine on discharged was 12.59 mg/l.
- 3 cases developped CKD (3.79 %).
- We registered 15 cases of death (18.9%).



Evolution of patients

Conclusion

Leptospirosis is the most worldwide distributed zoonosis. Acute renal failure is reported in 40 to 60 % in patients with leptospirosis. The renal involvement is of good prognosis if early and proper care is giving. However, it may require renal replacement in 6 to 49% of cases (21% in our study).

Evolution to CKD is possible in few cases. Signs and symptoms should be known of the clinicians to enable early diagnosis and management of cases in order to reduce the mortality.

References

1. A retrospective 5-year study in Moldova of acute renal failure due to leptospirosis: 58 cases and a review of the literature. *Nephrol Dial Transplant* (2003) 18: 1128–1134
2. Clinical presentation of leptospirosis: a retrospective study of 34 patients admitted to a single institution in metropolitan France. *Clin Microbiol Infect* 2005; 11: 391–394
3. Clinical presentation of leptospirosis: a retrospective study of 201 patients in a metropolitan city of Brazil. *Infect Dis* 2010;14(1):3-10]
4. *Leptospirosis: a zoonotic disease of global importance.* Ajay R Bharti, Jarlath E Nally, Jessica N Ricaldi. *Lancet Infect Dis* 2003; 3: 757–71

