

Background

The diagnosis and treatment of tropical disease leading to a few typical symptoms and signs are challenging, especially in not endemic settings. We present here a case of mild to moderate leptospirosis and discuss how to optimize the clinical management.

Case

A 81-year-old female presented with progressively worsening fever and fatigue. 11 days to 19 days before admission, she traveled to Panama with walking through marshland for bird watching. 5 days prior, she felt fatigue. 4 days prior, she complained of fever, vomiting, soft stool and abdominal pain at right lower quadrant. 2 days prior, she couldn't walk by herself due to severe fatigue, she was delivered to our hospital. She had a history of hypertension. Her first impression was relatively sick. Blood tests were unremarkable except for increase of C-reactive protein (22.89 mg/dL, normal value <0.3 mg/dL) and thrombocytopenia and slightly kidney dysfunction. Urinalysis revealed mild proteinuria and pyuria. Plain CT on the abdomen revealed a misty mesentery around kidneys (Figure 1). Initially, she was treated with ceftriaxone and then transitioned to levofloxacin, suspected of Typhoid fever or urinary tract infection. Her symptoms continued to do well. After discharge, she was diagnosed with leptospirosis by microscopic agglutination test.

Review of systems

【+】 fever, fatigue, loss of appetite, abdominal pain, vomiting, soft stool

【-】 chills, rigors, weight loss, rash, headache, sore throat, short of breath, chest pain, muscle pain, diarrhea

Laboratory data

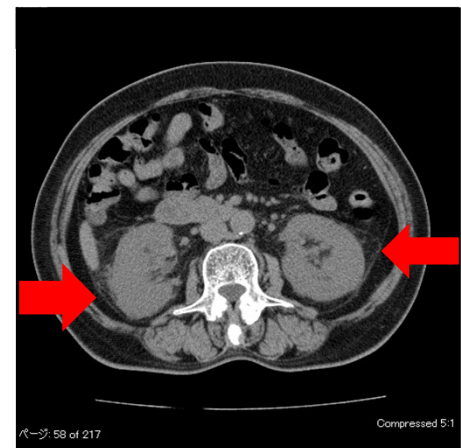
TP	5.7	g /dL	WBC	7070	/μL
Alb	2.5	g /dL	Neut	91.3	%
AST	33	IU/L	Hb	12.4	g /dL
ALT	40	IU/L	HCT	36.3	%
T-bil	0.9	mg/dL	PLT	11.1 × 10 ⁴	/μL
BUN	40.5	mg/dL	Urine		
Cre	1.15	mg/dL	U-WBC	10-19	/HPF
CRP	22.89	mg/dL	U-protein	2+	

Microbiology

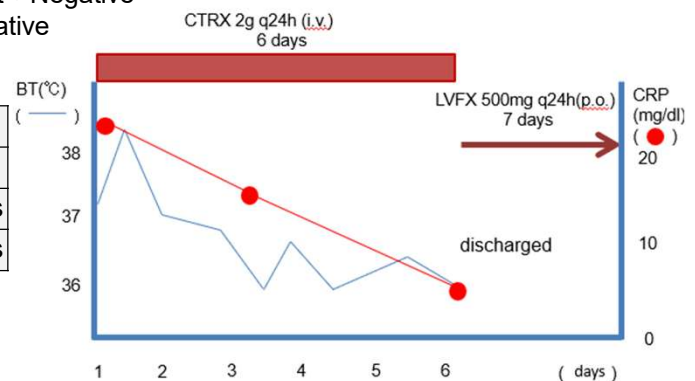
Rapid diagnostic test	Day1	Giemsa strain	Day 1	Day3
Dengue fever IgM/IgG/NS-1	(-)	<i>Plasmodium</i>	(-)	(-)
Chikungunya IgM	(-)	Blood culture 2/2 set	: Negative	
Malaria Pf/Pan	(-)	Urine culture	: Negative	
Influenza A/B	(-)			

Microscopic agglutination test	Antibody titer		
	Day 6	Day 16	
<i>L.Borqpetersenii</i> serovar Poi	< 50	400	times
<i>L.Interrogans</i> serovar Habdomadis	50	400	times
PCR (Target: Flagellum gene <i>flab</i>)	Day 6	Day 8	
Serum	(-)		
Whole blood		(-)	

Figure 1. Plain CT on the abdomen



Time course



Discussion

We present a case of mild to moderate leptospirosis without known typical symptoms and signs. Key aspects of suspecting leptospirosis include her recreational activities at marshland. Additionally, this case had no organisms were seen on blood culture and urine culture with prior antibiotic exposure. Leptospirosis might be overlooked among undiagnosed tropical diseases with successful progression due to antibiotics.