# Cosmopolitan Leptospirosis

**Vitorino Modesto dos Santos**[1]

[1]Armed Forces Hospital and Catholic University of Brasília, Brasília-DF, Brazil.

**Corresonding author:** Vitorino Modesto dos Santos, MD, PhD;
Address: Estrada do Contorno do Bosque s/n, Cruzeiro Novo, 70658-900, Brasília-DF, Brazil;
Telephone: +556139662103; E-mail: vitorinomodesto@gmail.com

I have read recent and relevant manuscripts about the occurrence of leptospirosis in Albania, and would like to address comments about some challenges reported by Brazilian and Albanian authors (1-4). The annual incidence of human leptospirosis in Albania is 1.0 per 100,000 of the general population (2). Although preventable, this endemic cosmopolite zoonosis is considered a main public health problem, which occurs both in rural and urban environments with higher frequency in tropical regions (1-4). Another concern is about leptospirosis that develops in travelers involved in touristic activities (1,2). Frequent diagnostic challenges have occurred in primary care setting due to the lack of specific features of "Weil's disease/syndrome", including jaundice, hemorrhagic phenomena and acute renal failure (1-4). Initially, acute febrile illnesses often share nonspecific features that may induce clinical misdiagnosis; with respect to leptospirosis, diagnostic pitfalls are more frequently reported in anicteric individuals (2,4). Therefore, hemorrhages in the skin and in conjunctiva, and icterus, are valuable diagnostic clues (1-4).

Puca et al. reviewed the data of 107 Albanian patients with leptospirosis from 2009 to 2014, with mean age of 43.7±17.8 years and age range between 17 and 78 years; and 89.7% of the patients were male (2). Conjunctival and sub-conjunctival bleedings were found in 81.3% and 11.2% of cases, respectively; while jaundice (62.6%), cutaneous rash (58.8%), and pruritus (5.6%) were the most common skin changes (2). The authors highlighted the relationship between uveitis (38.3%) and the more severe systemic disease; and emphasized the skin and ocular changes as suspicion index for travelers in and out of the country (2).

Puca et al. (3) described a previously healthy 41 year-old male with the classical features of Weil's syndrome, who had acute pericarditis in the immune phase of disease, without any relationship to uremia. He had dyspnea, jugular distention, EKG changes, and pericardial effusion on echo-cardiography study. The authors commented that an immune phenomenon would be the origin of pericardial involvement; however, this particular issue could be better cleared and understood after further respective research (3). Remarkable tests (normal values) were urea: 169.2 (<43 mg/dL); creatinine: 8.4 (<1.3 mg/dL); ALT: 6,330 (<45 mg/dL); AST: 6,480 (<35 mg/dL); CPK: 4,870 (<171 UI/L); and INR: 8.4 (<1.2%). Treatment of leptospirosis with ampicillin 6 gr daily, and NSAIDs for pericarditis resulted successful. Similar to Brazilian concerns, Albanian authors called attention to the tourism destination in high risk areas; and focused the ocular and cutaneous changes as early

diagnostic suspicion indicators easily detected (3). Worthy of note, early diagnosis and prompt treatment constitute the cornerstone of successful outcomes. In fact, accurate inspection during physical examination frequently yields useful findings to enhance the suspicion index of primary health care workers, reducing the number of undetected leptospirosis (1-4).

Based on the current literature, acute pericarditis has been scarcely reported in leptospirosis (3,4). Although icteric leptospirosis has more severe prognosis, anicteric patients may have this complication; thus, I would like to comment pericarditis in a young Brazilian man with anicteric leptospirosis (4). Remarkable tests (normal values) were urea: 35.4 (<50 mg/dL); creatinine: 1.5 (<1.3 mg/dL); ALT: 93 (<42 U/L); AST: 97.5 (<42 U/L); INR: 1.39 (<1.2%); CPK: 664 (<120 ng/mL); CK-MB: 23.1 (<3 ng/mL); myoglobin: 170.6 (<90 ng/mL), troponin T: 1.93 (<0.1 ng/mL); and CRP: 17.3 (<0.8 mg/dL). The patient had an anicteric form of disease with normal renal function and lack of skin and ocular changes; the cardiac and muscle injury markers were very high, but the changes of livers enzymes were mild (4). Similar to the Albanian case study, the diagnosis of acute pericarditis was considered unquestionable. The patient was administered ceftriaxone 1 gr IV twice daily, and became asymptomatic in D12 of treatment (4).

In endemic areas of leptospirosis, this zoonosis should be included in the etiologic roll of pericarditis.

**Conflicts of interest:** None declared.

## References

1. dos Santos VM, dos Santos JA, Sugai TA, dos Santos LA. Weil's syndrome. Rev Cubana Med Trop 2003;55:44-6.

2. Puca E, Pilaca A, Kalo T, Pipero P, Bino S, Hysenaj Z, et al. Ocular and cutaneous manifestation of leptospirosis acquired in Albania: a retrospective analysis with implications for travel medicine. Travel Med Infect Dis 2016;14:143-7.

3. Puca E, Stroni G, Qyra E, Hysenaj Z, Zguri L, Pilaca A. Pericarditis as a rare complication of severe leptospirosis. Trop Med Surg 2015;3:1000193.

4. Santos VM, Santos UM, Gebrin DG, Santos AM, Cançado AC. Anicteric leptospirosis with pneumonitis, pericarditis and acalculous cholecystitis. Infez Med 2014;22:236-40.