



Leptospirosis Case Report with Renal Insufficiency

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Introduction: Leptospirosis is an international zoonotic condition relay and rising prevalence the causes of the infection *Leptospira spirochete* with popular exhibition of polluted clean water. Most asymptomatic diseases, but the symptoms are moderate, autonomous, specific febrile and respiratory non-specific disorder high mortality rates of renal failure.

Case: A 33-years-old woman from rural area came to the hospital in casualty with a history of high grade fever (40 degree Celsius), with chilling, headache, stiff neck. Urinary retention along with productive cough for three days.

Intervention: The patient underwent inpatient management, which included tablet Ceftriaxone 1gm twice a day, Tablet Doxycycline 100 mg bd given and intravenous fluids 5% dextrose and dextrose/sodium chloride solution, Injection Furosemide 20 mg intravenously twice a day were given to the patients.

Nursing management: monitoring the vital sign, maintain the O₂ levels as well as the consumption and output. All basic nursing care has been provided. Her symptoms cured after two weeks of treatment, she was discharged.

Results: Fever has been minimized. The therapy is reacted to and restored.

Conclusion: Management was mainly aimed at protecting patient wellbeing, preventing complications and improving the quality of life. The patient received all medical therapy and the results show that the therapy and care was effective.

Keywords: Jaundice; Leptospirose pathogenic; renal failure; nursing management.

1. INTRODUCTION

Leptospirosis is a spirochete interrogatory Leptospira's zoonosis. In tropical and subtropical areas, this disease is significantly higher compared to temperate regions[1].

World-wide, leptospirosis is on the rise, and developing countries are not immune to this trend. Due to the lack of access to appropriate diagnostic procedures, this statistic has been on the rise [2].

In recent years, natural disasters and poor sanitary conditions have combined to make leptospirosis a major public health issue[3].

As a result of natural disasters and unsanitary conditions, leptospirosis has become a major public health issue in recent years [4]. As early antibiotic therapy is highly beneficial in stopping the progression of the disease, it is important to diagnose the disease as soon as possible [5].

Leptospirosis is an unknown and very poor public health problem in India. The spectrum of clinical qualities varies from insufficiency of the sub clinic to multiorgan. In developing countries, the burden of leptospirosis is higher[6].

It has almost 20 serogroups and 200 serovar types. It is a pathogenic disease of Leptospira genus currently. While the disease was recognized for decades, the key explanation for the disease's high burden in poor develops countries was not completely discussed [7].

Leptospirosis was listed as one of the key public health problems because of the incidence and occurrence of bad health problems in natural disasters [8].

The disorder is endemic in Kerala, Tamilnadu, Gujarat, Andaman and Karnataka. In addition to Delhi and Puducherry, Andhra Pradesh, Orissa, West Bengal and Uttar Pradesh were registered [9]. Natural catastrophe occurrence and the prevalence of adverse health conditions have led to leptospirosis as a significant public health issue and multiple epidemics [10].

Leptospirosis is more prevalent in developing countries, and there is a paucity of literature available on the disease's prevalence and clinical manifestations in India, according to the World Health Organization.

2. CASE REPORT

A 33-years-old rural woman came to the emergency department with a major complaint having fever (40 degree Celsius), Productive cough for three days. Tachycardic (112 beats per minute) with chilling, headache, stiff neck and nausea. icteric and conjunctivalhaemorrhages were observed on examination. she is not able to pass urine. Blood has been given for testing including smear for leptospiral antibody testing and malaria parasites. 83000/mm³ was the platelet count. Period of bleeding and time of clotting were within normal limits. 9.2 mg/dL of hemoglobin. Her bilirubin serum had 3.4 mg/dL (direct-0.9 mg/dL, indirect-2.6 mg/dL), aspartate transaminase (SGOT) had 38 IU, alanine transaminase (SGPT) had 42 IU, and serum Alkaline Phosphatase (ALP) had 138 IU. Serum glutamate transaminase was 42. Creatinine serum was 5.6 mg/dL and urea blood 156 mg/dL. Blood smear was negative for malaria. The malarial parasite strip test has also been negative. Tests for viral screening were poor. The IgM antibody leptospiral strip test was positive. Antibiotics Injection ceftriaxone 1 gm and Tablet doxycycline 100mg was given and intravenous fluids along with loop diuretics injection frusimide 20 mg twice were given. She is a dairy farmer with a family and cares for her cows in a farm with her bare foot, which may confirm the source of infection. The doctor released her on a antipyretic tablet acetaminophen and Antiemetic tablet ondasetron prescription. The patient reported that acetaminophen controlled her fever. The patient was completely healed following further follow-up.

3. DISCUSSION

Leptospirosis is widespread throughout the world but most often seen as a result of heavy rain and feeding in tropical and subtropical regions. Water and food contaminated by urine in infected rats is often distributed [11].

Leptospirosis is a persistent febrile condition and the symptoms displayed depend on the organ. The central nervous system, the immune system, liver, lung, eye and kidney system are mainly involved reproductive system. Fever was the most common clinical occurrence in more than four leptospirosis patients in this study. This is consistent with the studies in the North and Southern India. This is consistent with the findings [12].

Based on the adequate history of exposure, along with all investigations, leptospirosis should be suspected.

The Jamaican households with a history of leptospirosis were analyzed by Paul Allwood et al [13] in Information, attitudes and environment risk factors. Between September 2008 and March 2009 the study employed a cross-sectional design in 43 parishes in St. Mary, Jamaica. Households with at least one leptospirosis confirmed case during 2005 or 2007 outbreaks have been tested for living conditions, environmental hygiene and knowledge of leptospirosis and risk perceptions. The study concluded that rural community education on Leptospirosis and its prevention by adequate disposal of waste and control of rodents should be undertaken urgently.

3.1 Prevention and Treatment

- The use of antibiotics, such as Doxycycline or Penicillin, to treat leptospirosis should take place early on in the disease.
- IV antibiotics may be required for people with serious symptoms.
- There is no reliable human vaccine worldwide
- Avoiding swimming or wading in water that is polluted with animal urine may reduce the risk of infection.
- A individual exposed to polluted water or soil should wear protective clothing or footwear for work or pleasure.
- Hands should be washed before eating, drinking, or smoking after the handling of animals, or infected clothes or other products.
- Doxycycline (200mg weekly) can be effective for people who may be at high risk for short periods, especially through their occupation.
- General guidance on mitigation requires steps to minimize populations of rodents such as removing garbage and stopping rodents from accessing the houses.
- Cutting or abrasions occurring should be covered before exposure with waterproof dressings
- Cuts or abrasions should be cleaned up thoroughly during the activities[14].

4. CONCLUSION

Leptospirosis is an infectious disease that is usually seen in India and certain other part of the

world. Sensitization in rural people is therefore necessary in order to prevent leptospirosis and timely mortality management.

CONSENT

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/ her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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