



“A CASE REPORT ON LEPTOSPIROSIS A BACTERIAL DISEASE”

Nursing

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ABSTRACT

Introduction: Leptospirosis is a zoonotic bacterial infection with significant mortality and morbidity, especially in resource-limited settings. This systematic review aimed to study the clinical profile and outcome of patients with leptospirosis in India. Leptospirosis is an acute zoonotic infection caused by spirochetes in the genus *Leptospira*. Vasculitis that is widespread sets it apart. It is usually introduced indirectly through polluted water, seldom through direct contact with diseased animals. The most common ways that *Leptospira* bacteria enter the body are through skin injuries or mucous membranes. From low fever and latent infection to severe signs like jaundice and renal failure, clinical syndromes can vary widely in severity. **Main symptoms and/or important clinical findings:** The 16-year-old girl complained to her parents about having a fever and dyspnea over the past two days. Red eyes, nausea, vomiting, high fever, headache, chills, muscle aches, abdominal discomfort, diarrhea, and rash are symptoms of jaundice (yellow skin and eyes). Following an examination and investigation, a doctor's case diagnosis Using injections of pan40 mg, emset 4 mg, ivf DNS, and ceftrizone 1 gmbd / 100 mg, the patient received all recommended treatment, and the prognosis was favorable. **Conclusion:** Leptospirosis is associated with significant mortality in Indian settings. There is a need for studies focussing on treatment modalities. A common zoonosis, leptospirosis is brought on by infection with pathogenic *Leptospira* species. Leptospire can cause a very broad range of diseases in humans, from asymptomatic infections to severe multiorgan infection syndromes that have a high fatality rate.

KEYWORDS

Jaundice, Pulmonary Haemorrhage, Acute Febrile Sickness, Leptospirosis, *Leptospira*, Weil's Disease, Acute Febrile Illness

Leptospirosis is an environmental and zoonotic illness. Animal kidneys can harbor bacteria for months or even years, and the urine of these animals releases the bacteria into the surrounding environment. Humans can contract the disease by coming into touch with contaminated water or diseased animals. This contamination can enter the body through a variety of routes. For example, it can enter through a skin injury, enter through the mucous membranes, or enter through the inhalation of pee droplets while farming. It can also occasionally enter the body through drinking water.1

Leptospirosis is an illness caused by the bacteria *Leptospira*. You can get leptospirosis after getting water or soil contaminated by animal pee (urine) in your nose, your mouth, your eyes or a break in your skin. Leptospirosis can cause flu-like symptoms that can worsen into Weil's syndrome, a life-threatening illness, in a small number of people.2

Leptospirosis is an infectious disorder of animals and humans. It is the most common zoonotic infection in the world. It is easily transmitted from infected animals through their urine, either directly or through infected soil or water.3It can cause a self-limiting influenza-like illness or a much more serious disease. It is known as Weil disease, and it can progress to multiorgan failure with the potential for death.

Patient specific Information:

16 yrs old female child was brought by her parents with complaints with fever, chills, headache, muscle aches, vomiting, or diarrhoea the patient may recover for a time but become ill again.

If a second phase occurs, it is more severe; the person may have kidney or liver failure or meningitis

Primary concerns and symptoms of the patient:-

The bacteria that cause leptospirosis are spread through the urine of infected animals, which can get into water or soil and can survive there for weeks to months. Many different kinds of wild and domestic animals carry the bacterium. Chief complaint of abdominal pain & chest pain, breathlessness, fever with primary symptoms which was observed at the time of admission.

Medical, family, and psycho-social history:-

According to patients family member detail information given about her past medical and surgical history she had no any previous history like asthma and tuberculosis. she had good relationship with her family.

Relevant past interventions with outcomes :-

Leptospirosis is treated with antibiotics, such as doxycycline or penicillin, which should be given early in the course of the disease. Intravenous antibiotics may be required for persons with more severe symptoms. administration of antimicrobial therapy for treatment of

patients with severe leptospirosis.

Physical Examination:-

ptof the many symptoms the most common clinical features of leptospirosis include fever, headache, myalgia (particularly in the calf muscle), conjunctival suffusion, jaundice, general malaise in addition to other symptoms/signs. Incubation period: 5-14 days, with a range of 2-30 days. lung examination results may be normal in early or mild illness. In severe illness, signs of consolidation due to alveolar haemorrhage may be found. In patients with cardiac-related pulmonary edema, rales and wheezes can be heard. Abdominal examination may reveal liver enlargement and tenderness due to hepatitis. Physical examination findings of leptospirosis depends upon the severity of the disease. In the early days of the disease, patient may show signs of upper respiratory tract infections, later findings varies with the severity of the disease, immune status of the host and the organ system involved. a distinguishing, but often overlooked, finding is conjunctival hyperemia ('suffusion'), which has been reported in a majority of patients with leptospirosis in some case series [38,39]. It is characterized by bilateral dilation of conjunctival blood vessels causing conjunctival erythema without purulent discharge (in contrast to conjunctivitis, which includes purulent discharge) and is uncommon in other infectious diseases. In a minority of patients, subconjunctival hemorrhage (ie, focal, flat, bright red patches) occurs with or without conjunctival suffusion .

Clinical findings:-

Clinical signs of leptospirosis may include anorexia, vomiting, lethargy, abdominal pain, polyuria, oliguria, or anuria. Abnormalities such as azotemia, hyperphosphatemia, metabolic acidosis, hyponatremia, and hypo- or hyperkalemia may be detected by serum biochemistry or serum blood gas analysis. The traditional classification of the clinical course of leptospirosis is a "immune phase" that comes after the "leptosiraemic phase," also known as the acute phase. Eleven Three to nine days are considered to be the duration of the first "leptosiraemic phase," which manifests as an acute febrile illness without a clear cause. There's a fever, chills, myalgia, and headache.

Timeline:-

Leptospirosis has a wide range of symptoms, but among the most common clinical features are fever, headache, myalgia (especially in the calf muscle), conjunctival suffusion, jaundice, and general malaise. 5–14 days, with a range of 2–30 days, is the incubation period.

Diagnostic Assessment:

Seldom is a diagnosis made by a positive culture of blood or urine; instead, a 16-year-old girl must have a positive polymerase chain reaction (PCR) of her blood or urine or positive serologic

testing. Diagnostic testing includes imaging, surveys, laboratory testing, and PE.

PCR detects DNA in blood in the first 5–A multitude of PCR assays have been developed in response to the need for quick diagnostics at the time of admission. Their benefit is that they can get a final diagnosis while the disease is still in its acute phase, before antibodies are found, and possibly even before treatment is efficacious. 10 days after the onset of the disease and until the fifteenth day. Serum and blood contain between 105 and 109 leptospires/L of bacteria.

Diagnosis:

Following a physical examination, the investigating physician determined that case A was a bacterial leptospirosis. The patient was diagnosed with leptospirosis and presented with sudden fever, chills, headache, myalgia, and jaundice. The investigating physician concluded after a physical examination that case A was a case of bacterial leptospirosis. Leptospirosis was the cause of the patient's sudden fever, chills, headache, myalgia, and jaundice.

DISCUSSION:

Due to its non-specific clinical presentation and tendency to overlap with many other causes of acute febrile illnesses, leptospirosis is occasionally misdiagnosed. A high index of clinical suspicion is necessary in patients who have leptospirosis risk factors in order to guarantee prompt diagnosis and treatment. Treatment setbacks may raise the risk of serious side effects, such as acute liver failure, acute renal failure, and pulmonary hemorrhage. Antibiotics like penicillin or doxycycline are used to treat leptospirosis, and they should be administered as soon as possible. Individuals experiencing more severe symptoms might need to receive antibiotics intravenously. A bacterial illness known as leptospirosis can strike both people and animals. *Leptospira* bacteria are the cause of it. It can cause a wide range of symptoms in humans, some of which could be misdiagnosed as illnesses.

CONCLUSION:

Intravenous antibiotics may be necessary for those with more severe symptoms. Leptospirosis is a bacterial disease that can affect both humans and animals. The bacteria known as *Leptospira* are to blame. Humans can experience a wide range of symptoms from it, some of which may be misinterpreted as illnesses. After reviewing the research done in Lithuania, it was determined that wild animals like wild boars and small rodents are natural leptospirosis reservoirs in some areas of the country and a major potential source of the disease for humans and other wild and domestic animals. Therefore, in order to comprehend leptospirosis better and perhaps even find a way to lower the number of cases and fatalities, more research on the disease and advancements in molecular diagnostics for pathogen identification are required.

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