

Leptospirosis Associated with the Ingestion of Packaged Foods and Working Environment Conditions: A Case Report

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The Aim was focused on to describe the diagnosis and evolution of the case of the illness of Weil in male one of 34 years with labor and environmental risk activity to develop Leptospirosis. A case report was realized based on case history, diagnosis, and treatment in hospital. The carried out tests denote the Weil illness with positive answer to the treatment and high out of risk labor and environmental with treatment at home. The labor and environmental conditions suppose risk for leptospirosis, the treatment with doxiciclina/200 mg c/12 hours, with progressive recoverability and treatment at home.

Keywords: leptospirosis, associated ingestion, packaged foods, working environment conditions, association labor and environmental, doxycycline.

Leptospirosis is a bacterial disease that affects humans and animals. It is caused by a bacterium of genus *Leptospira*. It is estimated that 10 million are infected with leptospira each year and it is difficult to estimate exactly how many of them die from this condition, in large measure by which the deaths occur in countries where the deaths are not subject to routine reporting¹. Is considered to be an emerging disease in many countries². The infection can cause fever, renal failure and pulmonary hemorrhage and is potentially fatal in 5% to 15% of cases^{3,4,5,11}.

The leptospirosis is known by different names: Weil disease, disease of those tending the pigs ran off, fever of the rice paddies, fever of the

reed beds, and so on². It is a zoonotic disease, the animals most affected are the dogs, cattle, and pigs³. Leptospirosis in animals is often subclinical, and with high concentrations of bacteria in urine, without clinical evidence of disease³.

The etiologic agent includes 2 species: *L. interrogans*, pathogenic for animals and humans and *L. biflexa*, which is of free life. *L. interrogans* is divided into over 210 serovars and 23 serogroups. This classification has epidemiological importance since the clinical picture and in general the virulence is not related to the serovar. You can survive for any length of time in the water or moist environment, temperate, with pH neutral or slightly alkaline⁴.

The at-risk population corresponds to endemic areas of developing tropical countries; in developed countries it is occupational disease of those working with animals (farmers, veterinarians,

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farmers, dairy, butchers, workers of refrigerators or sanitation and farmers), its products or polluted, especially with rodents; man can become infected in recreational activities in contact with contaminated stagnant water (bath, water sports, fishing) or contact with your pet, inhaled aerosols can be transported microorganisms directly to the lungs. Transplacental transmission is possible³.

In Mexico the registration of leptospirosis starts until the year 2000 on the system of weekly reporting of new cases of disease subject to surveillance epidemiological. From 2001 to 2012 has generated a report of 2,001 cases between 2003 and 2012, 50% of the cases were men and 50% women, the highest rate of reported cases are Chiapas, Veracruz, Sonora, Tabasco and Sinaloa⁵.

The clinical manifestations acute are variables, incubation period of 2 to 20 days, stress symptoms influenza, conjunctival injection, fever^{6,7}, myalgias in legs and thighs that limit the march, retroocular pain, photophobia, exanthema morbiliforme, petechiae in palate, nausea, vomiting, abdominal pain and diarrhea, the symptoms are parallel to the phase leptospirémica, they autolimit themselves from 7 until 10 days later with the beginning of the immune phase (the second week), 10% with hemorrhage in skin and mucous membranes, partner to plaquetopenia, jaundice, and respiratory renal flow for diffuse alveolar hemorrhage, and the shock state, the severe and potentially mortal form of leptospirosis icterica is the Weil illness, the fever reappears associated with meningitis hemolysis, myocarditis, corioretinitis, sharp and respiratory renal flow⁸⁻¹¹.

Clinical picture. The clinical manifestations are highly variable characterized by high fever, headache, chills, muscle pain, and vomiting, you can include jaundice, conjunctivitis, abdominal pain, diarrhea, or rash. The diagnosis of leptospirosis should be considered in any patient that this sudden fever, chills, headache, jaundice and conjunctival injection, myalgia most notable in the areas lumbar and calves which constitute one of the symptoms most distinctive of the disease. Laboratory findings in samples of hospitalized patients show high rates of ESR, thrombocytopenia, leukocytosis, hyperbilirubinemia, and elevated levels of serum creatinine, creatinine kinase and serum amylase¹.

Case history

An case report was conducted in 34-year-old male worker on a farm in the care of animals, with a picture of 8 days of evolution with fever, chills, headache, cough, dyspnea, nausea, vomiting, abdominal pain, hyposthenia from, hypodynamy, epistaxis, expectoration, gingival bleeding, petechiae, congestion conjunctival bilateral, lumbar pain; to the physical exploration, febrile, hypotensive, tachycardia, tachypnea, icteric, dehydrated, confused, disoriented, subconjunctival hemorrhage bilateral, rales bilateral basal adenomegaly, generalized maculopapular rash predominating in the thorax and abdomen, hepatomegaly, abdominal pain, not peritoneal irritation.

Laboratory studies

Hyperbilirubinemia to predominance of the direct one, hiperamilasemia, transaminasemia, phosphatase alkaline raised, hipokalemia, time of long prothrombin, normochromic anemia, thrombocytopenia, leukocytosis, neutrophilia, bandemia, high CPK, azotemia, proteinuria, hematuria, blood culture and urine culture of revenue negatives, arterial gas with hypoxemia and desaturation, kirby's index under, short circuits intrapulmonary and the difference alveolar-arterial of oxygen raised. With positive antibodies against leptospira, 1:320, (skill of immunofluorescence), it isolated itself *Leptospira icterohaemorrhagiae*. electrocardiogram: sinus tachycardia, and ventricular extrasystoles Chest x-ray: pulmonary infiltrates bilateral diffuse.

Evolution of the patient

Evolution torpid, hemodynamic instability, acute respiratory failure, anuria, and progressive deterioration multisystemic, required hydroelectrolytic treatment, vasoactive amines, orotracheal intubation and ventilatory support mechanical, maneuvers of alveolar recruitment for protection pulmonary, and antimicrobials triple coverage, without reply in the first 5 days of treatment to support multiple organ failure, blood and urine cultures of income, is interrogated to family, has been reported as a worker on a farm in the care of animals (pigs, dogs, sheep, chickens, horses), lived in a cellar where they stored grains and canned beverages, which were ingested without cleaning them. On the basis of the results starts doxycycline 200 mg every 12 hours, with clinical response clear and progressive, with

retrievability of cardiac dysfunction, respiratory and renal, became independent from the infusion of amines vasopresoras and ventilatory support, in a period of 72 hours, the treatment was completed by 10 days, with total remission of the table of organ dysfunction.

DISCUSSION

One of the important factors for the beginning of the health-disease process is the environment, although in this case, the work environment facilitated the infection, the social aspect is immersed in the same way, this person lived and worked In this environment, rodents and store canned food between the straw shot the onset of the disease. Perhaps this is already common, but in the medical consultation is not common to question the patient where he lives, here the expertise of the doctor served to guide him on the diagnosis, which was confirmed by laboratory tests.

It is important that the doctor questions the patient where he lives, how he lives, environmental conditions, not only the clinical history, so he or she can even request certain types of clinical laboratory tests.

This disease is caused by bacteria of the genus *Leptospira*, the presence of *Leptospira icterohaemorrhagiae*¹ was demonstrated, Is considered to be an emerging disease², its clinical symptoms, laboratory tests and the environmental conditions in which it lived and worked make up a triangle confirming the diagnosis of Weil's Disease or Leptospirosis. The important thing is that the patient responded to the treatment with doxycycline 200 mg every 12 hours, since this disease can lead to complications such as meningitis, hemolysis, myocarditis, chorioretinitis, sharp and respiratory renal flaw and even death⁸⁻¹¹

Another aspect to consider is that in the self-service stores are sold dirty canned food and beverages, previously stored in warehouses, where surely rodents and other animals can deposit their urine or transport the bacteria waiting to be bought by someone without washing the can consume that kind of products. It is therefore recommended to wash cans contain food or drinks before opening and consuming their contents.

CONCLUSION

The occupational and environmental conditions are a risk for leptospirosis, treatment with doxycycline/200 mg C/12 hours, with clinical response clear and progressive recoverability of cardiac dysfunction, respiratory and renal, became independent from the infusion of amines vasopresoras and ventilatory support/72 hours/ treatment for 10 days with a referral to organ dysfunction.

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