Case report

Bloody diarrhea: A rare chief complain of leptospirosis

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Abstract

Objective: Leptospirosis is one of the most common zoonosis diseases that presents by involvement of different systems. This infectious disease ranges from mild to very severe but bloody diarrhea is not a known clinical primary manifestation of the illness.

Case Presentation*:* We describe a patient with leptospirosis who was admitted because of bloody diarrhea in the beginning. The patient admitted as a probable shigellosis case. Diagnosis of leptospirosis was confirmed based on result of Leptospira microscopic agglutination test (MAT). After 7 days treatment he made a complete recovery and was discharged.

Conclusion*:* Although leptospirosis with presentation of bloody diarrhea is an unusual report. Leptospirosis should be considered in all febrile patients particularly in farmers endemic area.

Keywords: *Leptospirosis, Diarrhea, MAT, Zoonosis.*

Introduction

Leptospirosis is a zoonotic disease in humans and animals caused by Leptospira species of the spirochete family (1). It has recently been reported as an emerging infectious disease around the world, including the Pacific region (2). This infectious disease is characterized with a wide spectrum of clinical presentation varying from a slight symptom to fulminant fatal disease (3-4). In the mild cases it can present flu like illness with fever, myalgia and headache. Severe form described by jaundice, renal failure, liver dysfunction and hemorrhagic diathesis is known Weil's syndrome. The primary event caused by leptospira is injury to the endothelium of small blood vessels result in ischemic damage to kidneys, liver, meninges and muscles (5). A low suspicion of this disease coupled with the variation and non-specificity of the clinical manifestation lead to significant number of patients that go unrecognized. Leptospirosis is a prominent under diagnosed disease in our country due to lack of enough awareness, different manifestations and inadequate diagnostic facilities in many areas. Early diagnosis and proper management can prevent fatal outcome (6-9).

Case presentation

A 26-year-old man was admitted to the infectious diseases ward of RAZI Hospital pertaining to Mazandaran University of medical sciences, in August 2014 with complaint of bloody diarrhea beginning from the day before admission day and was 8-10 times a day. Characteristics of diarrhea were bloody, Voluminous and low consistency, high frequent with tenesmus. The patient had vomiting night before that was not bloody. Fever initiated from the same night. Other symptoms of patient were malaise, true vertigo, and nausea, abdominal pain at hypogastric region and headache that started from the day of admisiona. he had sub-conjunctival hemorrhage, no photophobia, and no cervical lymphadenopathy. Based on history he was a farmer and was working in rice farm. No other family members showed similar symptoms in the recent days. After obtain of stool exam, Treatment with third-generation cephalosporin (ceftiaxone 1gram twice a day IV) was started empirically for probable shigellosis. Also normal saline serum, antipyretic prescribed and Primary laboratory tests were pled that results were in order below: total leukocyte count 6500/mm3,

hemoglobin 14.2, platelet count 105000 ,blood urea 51mg/dl and creatinine 1.3 mg/dl ,blood sugar 101,sodium 134 mg/dl potassium 4.1 mg/dl , erythrocyte sedimentation rate1 9 in 1st hr, CRP weekly positive, total serum bilirubin 3.8mg/dl ,unconjugated serum bilirubin 1.4mg/dl, FBS 107, SGOT 62, SGPT 51, phosphaorus 2.6, stool exam was done and it showed 15-20 WBC and many RBC and no evidence of ova,parasites and stool culture was negative after two days. 2 days later in CBC his leukocyte count was 4300, haemoglobin 12.2 and platelet count 71000.blood culture negative. In Stool culture he had no pathogen. After 3 days WBC in stool exam decreased to 2-3 and RBC was 10-15. After 3 days, patient's general condition was improved and gross bloody diarrhea was discontinued. Further investigation was conducted. It indicated negative serum viral markers for infectious diseases like dengue and viral hepatitis.Although the initial signs and symptoms were not usual in leptospirosis, because of epidemiologic data and thrombocytopenia, abnormal LFT, we thought about leptospirosis seriously. Therefore we sent microscopic agglutination test (MAT) which was positive for Sergoe hardjo Serovar of leptospirosis on titer 1:8oo.

Antibiotics were continued for 7 days until patient made a complete recovery of symtoms and plt count and then he discharged.

Discussion

Leptospirosis is a re-emerging zoonotic disease that was first depicted in the early 18th century. Many patients are observed in Iran particularly in the north area (7-8). It is more common in tropical regions. Wild or domestic animals, including rats, mice, sheep, cattle, pigs, dogs, raccoons, and goats, are the reservoir of leptospirosis (10-11-12). Infected animals, even vaccinated ones, excrete leptospira in the urine. It can persist for several months in the environment with appropriate temperature (28 to 32°C), moisture (13-14-15). Direct contact with the urine of infected animals or exposure to soil, water, or other matter contaminated with leptospira make humans infected (15-16). People with occupational risk include farmers, ranchers, loggers, trappers, veterinarians, rice-field laborers, and sewer workers. Entertainments such as swimming, canoeing and hunting may also involve contact with the pathogen (15). Headache, myalgia, nausea, and vomiting are the most common complaints; however, neurologic, respiratory, cardiac, ocular, and gastrointestinal manifestations can occur (12-13). Gastrointestinal involvement in leptospirosis with haemorrhage has been reported rarely, particularly in the severe form of disease (17-21). Electron microscopic studies show capillary system injury: endothelium swell and detach from the basement membrane leaving areas of exposed interstitium, even in areas free of hemorrhage. This event may justify the bleeding from vessels even in gastrointestinal system (15-16). Leptospirosis is however likely to be underobserved due to the lack of awareness of the disease, non-specific clinical manifestation, and delayed diagnostic test. In the differential diagnosis of in any acute febrile condition, Leptospirosis should be noted. Certain diagnosis is based on demonstration of the microorganism from different specimens such as blood (first seven days), cerebrospinal fluid (day four to ten) and urine (after tenth day) by dark field microscopy (8-15-17-18). Serologic tests like microscopic agglutination test (MAT), indirect hemagglutination test, dipstick ELISA and dot ELISA for IgM antibodies in combination with clinical signs and symptoms are compatible with establishment of diagnosis (8-10).

Conclusions

Leptospirosis with presentation of bloody diarrhea is an unusual report. A high index of suspicion is indispensable to ensure prompt diagnosis. Patients' general condition can worse rapidly if treatment is delayed. Leptospirosis should be considered in all febrile patients particularly with a history of exposure to freshwater, walking barefoot and working in rice farm, inhabitant of endemic area or travel to such places, recent flood and etc.

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