Acute Necrotising Pancreatitis Associated with Leptospirosis—A Case Report

Amit Kumar C. Jain · L. N. Mohan

Received: 2 August 2010 / Accepted: 17 November 2010 / Published online: 1 December 2010
© Association of Surgeons of India 2010

Abstract Acute Necrotizing Pancreatitis is a rare complication of leptospirosis and this association carries a high mortality rate. Only few cases have been reported in literature. We hereby report one such case we encountered.

Keywords Acute necrotizing pancreatitis · Leptospirosis

Introduction

Leptospirosis is an infectious bacterial disease caused by pathogenic leptospires and is characterized by a broad-spectrum of clinical manifestation varying from inapparent infection to fulminant fatal disease [1]. It affects both humans and animals especially, rodents. This disease is seen frequently in certain occupational groups like veterinarians, agriculture workers, slaughterhouse employees and sewage workers.

Leptospirosis mainly affects kidney and liver, rarely other organs like lung, gallbladder and brain are affected.

Association of necrotizing pancreatitis with leptospirosis has been rarely reported [2].

Case Report

A previously fit and well 45-year-old male presented with sudden onset of continuous generalized abdominal

pain of one day duration. He had one episode of vomiting. The patient had also noticed progressive abdominal distension and had not passed stools or flatus during this period. He was a smoker. There was no history of alcohol intake.

On examination, he was tachypneic, tachycardic and febrile. Abdominal examination revealed frank signs of peritonitis.

Initial investigations revealed Hb of 11 g/dl and total count of 4500. Platelets counts were 2.46 lakhs/cumm. The blood sugar, renal functions and serum electrolytes were in normal limits. LFT revealed Protein 7.7 gm%, Albumin 4.0 gm%, Total bilirubin 1.9 mg%, Direct bilirubin 0.3 mg%, SGOT 122 U/L, SGPT 85 U/L, Alkaline phosphatase 133 U/L, Prothrombin Time 29.6 and INR 2.5.

His serum amylase was 5300 U/L and Lipase was 1200 U/L. ABG revealed metabolic acidosis.

His x-ray abdomen and chest x-ray were normal.

Ultrasound abdomen showed moderate ascitis and pancreas not visualized.

Abdominal CT Scan [Fig. 1] showed a bulky pancreas with areas of necrosis and peripancreatic fluid collections. There was suspicion of superior mesenteric vein thrombosis. Rest of viscera was normal.

The patient was admitted and managed in the intensive care unit.

The abdominal symptoms, signs worsened in 12 hours and a possibility of mesenteric ischemia was also suspected in addition to the acute pancreatitis.

Laparotomy was performed on an emergency basis. Patient had gross ascitis (brown colour) along with severe haemorrhagic pancreatitis and extensive peripancreatic fluid collections. There was no evidence of bowel ischemia.

A. K. C. Jain · L. N. Mohan (✉)
Department of General Surgery,
St. John's Medical College and Hospital John Nagar,
Sarjapur Road,
Bangalore 560 034, India
e-mail: lnmohan@hotmail.com

Fig. 1 CT Scan film showing features of acute pancreatitis[above] with superior mesentric vein thrombosis[arrow below]

Peritoneal lavage was given followed by placement of suction drains in the lesser sac. A feeding jejunostomy was also performed.

Postoperatively he deteriorated. Repeat investigations revealed persistent thrombocytopenia, prompting a suspicion of leptospirosis, which was confirmed by ELISA. His platelets count dropped to 26,000 on day 3 even after adequate replacement.

Despite adequate supportive care, the patient expired 3 days after surgery due to multiorgan failure.

Discussion

Leptospirosis is a spirochetal zoonosis affecting humans as well as animals.

Rodents especially rats are most important reservoir. Transmission of leptospires may follow direct contact with urine, blood or tissue from an infected animal or exposure to a contaminated environment.

The pathogenesis of leptospirosis is incompletely understood. It probably causes damage to the capillary endothelium resulting in vasculitis, which is responsible for the most important manifestation of the disease. The commonly affected organs are the liver and the kidneys.

The incubation period is usually 1 to 2 weeks.

The disease can occur in two forms: Anicteric leptospirosis [3] and severe leptospirosis called Weil's Syndrome.

Laboratory findings reveal thrombocytopenia as a common finding occurring in 40–85% of cases. ESR and leucocyte are also elevated.

A definite diagnosis of leptospirosis can be made by microscopic agglutination test (MAT) and Enzyme linked Immunosorbent assay (ELISA).

Pancreatitis associated with leptospirosis has been reported rarely. Pancreatitis due to leptospirosis can range from painless pancreatitis [4] to severe necrotizing pancreatitis, which represents the most serious end of the spectrum as seen in this patient.

The management of pancreatitis in such patient has been either conservative/surgical based on the clinical parameters. Mortality is high due to MODS.

References

1. Fauci, Braunwald (2004) Leptospirosis. In: Harrison's Principles of Internal Medicine 16th edition, Dennis L Kasper, Eugene Braunwald, Stephen Hauser, Dan Longo, J Larry Jameson, Antony S Fauci. McGraw-Hill Companies. 9: 988
2. Ekrem Kaya (2005) Acute pancreatitis caused by leptospirosis: report of two cases. World Journal of Gastroenterology
3. Spichler A, Spichler E, Mouck M, Vinetz JM, Leake JA (2007) Acute pancreatitis in fetal ancestries leptospirosis. Am J Trop Med 76(5):886–887
4. Pai ND, Adhikari P (2002) Painless pancreatitis: a rare manifestation of leptospirosis. J Assoc Phys India 50:1318–19