International Journal of Research in Medical Sciences
Sharma ZP et al. Int J Res Med Sci. 2019 Aug;7(8):3183-3185
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012

DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20193415

Case Report

Case of acute abdomen due to acute pancreatitis: a uncommon presentation of leptospirosis

Zubin Pradeep Sharma*, Divya Sharma, Ravindra Sharma

Department of Gastroenterology, Aditya Hospital and Gastroenterology Centre, Sriganganagar, Rajasthan, India

Received: 28 May 2019
Revised: 17 June 2019
Accepted: 03 July 2019

***Correspondence:**
Dr. Zubin Pradeep Sharma,
E-mail: adityagastrocenter@gmail.com

ABSTRACT

Even though, Leptospiral infection is not rare, it can have different rare presentations. Acute pancreatitis is one such uncommon gastrointestinal manifestation of acute pancreatitis. Apart from the classic clinical features, elevated serum lipase, along with radiological proof and positive leptospiral serology confirms this infrequent association.

Keywords: Amylase, Leptospiral, Lipasepancreatitis

INTRODUCTION

Leptospiral infection is a worldwide zoonotic disease dominant in India, especially during the rainy season.[1] the clinical appearances vary from a mild asymptomatic illness to a severe fulminant hepatorenal failure.[1]Apart from the usual presentations, Leptospirosis may sometimes present with unusual systemic manifestations. Acute pancreatitis is one such unusual gastrointestinal presentation of Leptospirosis.[2] Here, author are reporting one such rare manifestation of Leptospirosis, from our hospital.

CASE REPORT

A sixty year old farmer was admitted with fever, body ache and diarrhea of three days duration. He was a chronic alcoholic and smoker. there was no history of hypertension, diabetes, ischemic heart disease or other chronic ailments.

On admission, the patient looked ill. He had a temperature of 39°C and jaundice there was bilateral conjunctival congestion and pedal edema. the patient had a pulse rate of 120 beats/minute and a BP of 90/60 mmHg in the right upper limb. the examination of the abdomen revealed abdominal distension, diffuse tenderness, guarding of all quadrants, hepatomegaly of 2 cm, and reduced bowel sounds. Respiratory system examination showed normal breath sounds in all lung fields and crepitations in the left infra-axillary region. there was no evidence of hepatic encephalopathy or any cardiovascular complications.

Routine blood investigations exhibited a normal hematocrit, elevated total blood count (12500/mm^3, P80, L20) and EsR of 40 mm/1st hr. On the day of admittance, the patient had a platelet count of 40,000/mm, blood urea of 162 mg and a serum creatinine of 2.4 mg. the serum bilirubin was 5.9mg, Ast 92Iu, ALt 52Iu, ALP 408 u, the serum amylase was 1176 u/L (normal - up to 122 u/L) and the serum lipase was 412 u/L (normal up to 60 u/L).[3] there were high titers of IgM Leptospiral antibody (ELIsA) detected on the tenth day. urine and stool examination were normal (Figure 1).

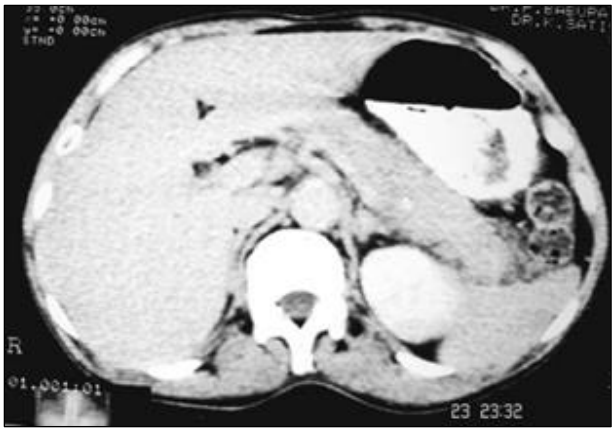

Figure 1: CT abdomen film of bulky, edematous pancreas.

X-ray of the abdomen showed dilated intestinal loops. ultrasound of the abdomen detected mild hepatosplenomegaly with bilateral minimal pleural effusion and consolidation of the left lower lobe. CT of abdomen showed a bulky, edematous pancreas with mild hepatosplenomegaly. course and treatment the patient improved dramatically with supportive measures and intravenous crystalline penicillin. Patient was given crystalline penicillin interavenus in a dose of 20 lakh units 6th hourly for seven days. Injection Octreotide 50 micro-grams IV infusion was given 8th hourly for three days. He was given injection Pantoprazole 40mg daily. He was kept nil-orally for 3 days and was on fluid resuscitation under close observation. His kidney and liver functions and the hemodynamic parameters were also closely watched. the fever subsided, abdomen became soft with normal bowel sounds. the renal function and liver function improved, and the platelet count was elevated. the findings of consolidation also improved clinically and radiologically. However, the amylase (487 u/L) and lipase (214 u/L) were remaining higher even after recovering from hepatorenal involvement.

Considering the sudden presentation of this sixty year old farmer- who was previously in good health, with fever, jaundice and generalized bodyache, raised blood urea, creatinine, liver enzymes, serum amylase and lipase; all settling to normal values with medical treatment; the possibility of acute pancreatitis caused by possible leptospiral infections is to be considered. Patient had features of hepatorenal involvement accompanying with elevated serum amylase and lipase and also high titers of Leptospiral IgM antibody.

DISCUSSION

Leptospira facilitated injury causes a vasculitis of the capillaries and thrombocytopenia.[3] The common manifestations of Leptospiral infection are anicteric hepatitis, febrile jaundice, acute renal failure, Weils syndrome (hepatorenal form) and septic shock with multi-organ failure.

Alimentary manifestations like acalculous cholecystitis, acute peritonitis, and acute pancreatitis are uncommon. there are few cases of pancreatitis due to Leptospirosis reported in the literature. Other unusual manifestations of Leptospirosis comprise cerebral vasculitis and stroke syndrome, GBs, myocarditis and DIC. spectrum of acute inflammation of pancreas fluctuates from edematous pancreas to necrotizing pancreatitis. the former one is mild and self-limited, whereas the latter is very severe. Necrosis of the pancreatic tissue relates with the severity of the attack and the clinical manifestations. Auto-digestion of the pancreas, caused by the proteolytic enzymes which are activated by various stimuli like toxins, ischemia, infection, trauma and drugs are liable for acute pancreatitis. Among the causes of acute pancreatitis, the common ones are alcohol, biliary disease, ERcP inducd and idiopathic. Infrequently, Leptospirosis is also known to cause acute pancreatitis. the precise mechanism of acute pancreatitis in Leptospirosis is not well understood. the small vessel vasculitis and ischemic injury leading to activation of proteolytic enzymes and auto-digestion is the likely mechanism. Hyperamylasemia in Leptospirosis even without pancreatitis is perceived because of renal failure and inactivation of reticuloendothelial system of liver which hamper the clearance of amylase.[4,5] Lipase is known to have great specificity (97%-99%) for the diagnosis of pancreatitis and is not significantly affected by modification of glomerular filtration rate.[6-8] concomitant rise of lipase, elastase-1, along with radiological evidence of inflammation of pancreas will approve the diagnosis of acute pancreatitis in Leptospirosis.

With every monsoon, there are several cases of Leptospirosis in this locality. Patients with shock, dIc and multi organ failure are having bad prognosis and higher mortality. This experience with pancreatitis in Leptospirosis is limited. Though reviewing literature, the fatal cases with pancreatitis were having hemorrhagic features and multi- organ failure.

CONCLUSION

Author present a case of probable leptospirosis with clinical, laboratory and imaging evidence of acute pancreatitis.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Levett PN. Leptospirosis. Clin Microbiol Rev. 2001;14(2):296-326.
2. Edward SCN, Evarard COR. Hyperamylasemia and pancreatitis in leptospirosis. Am J Gastroenterol. 1991;86:1665-8.

3. Bell MJ, ternberg JL, Feigin Rd. surgical complication of Leptospirosis in children. J Pediatr Surg. 1978;13(3):325-30.
4. Daher ED, Brunetta DM, Júnior S, Puster RA, Patrocínio RM. Pancreatic involvement in fatal human leptospirosis: clinical and histopathological features. Rev Inst Med Trop S Paulo. 2003;45(6):307-13.
5. Isogai M, Yamagychi A, Nakano s. Hepatic histopathological changes in biliary pancreatitis. Am J Gastroenterol. 1995;90(3):449-54.
6. Steinberg WM, Goldstein SS, Davis ND, Shamma's J, Anderson K. Diagnostic Assays in acute Pancreatitis, A study of sensitivity and specificity. Ann Intern Med. 1985;102(5):576-80.
7. Ventrecci M, Pezzilli R, Gullo L, Plate L, Sprovieri G, Barbara L. Role of serum pancreatic enzyme assays in diagnosis of pancreatic disease. Dig Dos Sci. 1989;34(1):39-45.
8. Buchman AL, Amenit ME, Moukarzel A. Total serum amylase but not lipase correlates with measured glomerular filtration rate. J Clin Gastroenterol. 1993;16(3):204-6.

Cite this article as: Sharma ZP, Sharma D, Sharma R. Case of acute abdomen due to acute pancreatitis: a uncommon presentation of leptospirosis. Int J Res Med Sci 2019;7:3183-5.