Scholars Journal of Medical Case Reports **ISSN 2347-6559 (Online)**
Sch J Med Case Rep 2014; 2(2):88-89 **ISSN 2347-9507 (Print)**

(An International Publisher for Academic and Scientific Resources) DOI: 10.36347/sjmcr.2014.v02i02.007

Painless pancreatitis: an unusual presentation of leptospirosis

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Abstract: Leptspirosis is a common tropical infection presenting with classical features of fever, jaundice and renal failure. Multiorgan dysfunction including Acute respiratory distress syndrome (ARDS) is a common pulmonary complication. Suclinical pancreatitis involvement is an unusual complication and should be looked for in patients presenting with laptospirosis
Keywords Leptspirosis, Acute respiratory distress syndrome (ARDS), pancreatitis

INTRODUCTION

Leptospirosis is a common disease encountered in tropical settings and has a variety of clinical presentations [1]. Awareness of the less typical forms of this illness is important from a clinical and epidemiological viewpoint. Leptospirosis may rarely present with isolated lung involvement and /or painless pancreatitis [2]. We present a case of human leptospirosis with atypical pneumonia and mild, asymptomatic pancreatitis.

CASE REPORT

A 34 year old male agricultural worker was admitted to the emergency department of a tertiary care centre in North India with a history of fever, non productive cough and progressive breathlessness over a period of 10 days. There were no other symptoms reported. On evaluation the patient was febrile and markedly tachypnoeic. There was no cyanosis or lymphadenopathy. JVP was not elevated. Chest auscultation revealed coarse crepitations. Rest of the systemic examination was unremarkable. Upon investigation his arterial blood gas profile was consistent with acute lung injury. Total leukocyte count was elevated at admission however haemoglobin and platelet count were normal. Biochemical profile showed mild transaminitis and normal renal function tests. Serum amylase was 156 U/L (Normal range 28-100 U/L) and lipase was 111.4 U/L (normal range 13-60 U/L). Chest radiography showed bilateral patchy consolidation and small mediastinal lymph nodes.(Fig.1) Contrast enhanced CT of the abdomen showed a bulky pancreas with peripancreatic fat stranding.(Fig.2) Blood and urine cultures were sterile. IgM ELISA for leptospirosis was strongly positive with a value of 33.5 PanBIO units/L (>11 considered positive). The patient was managed with intravenous antibiotics (ceftriaxone and azithromycin) and supplemental oxygen. He became afebrile after three days and repeat blood gases were normal. He was successfully taken off oxygen supplementation and discharged after a week of hospitalization. On follow up, the patient was asymptomatic however serum amylase was still elevated at 111 U/L.

DISCUSSION

Leptospirosis is a common tropical zoonosis characterised by a broad spectrum of clinical manifestations ranging from in apparent infection to fulminant multi-organ dysfunction as in Weil's disease [1]. Exposure to moist soil as encountered in paddy fields and during the monsoon season has been associated with increased incidence in Indian patients. As all patients may not present with the typical clinical manifestations, a high index of suspicion is necessary to identify and treat atypical presentations. Most symptomatic patients present with an acute febrile illness with non-specific signs and symptoms including myalgia and conjunctival suffusion. Weil's disease is a fulminant illness with high mortality characterised by jaundice, renal dysfunction, pulmonary involvement and haemorrhagic manifestations. Pulmonary involvement in leptospirosis is common as part of a multi-organ failure syndrome however isolated involvement is less well described [3-4]. Pulmonary involvement may range from acute respiratory distress syndrome, diffuse alveolar haemorrhage and "atypical" pneumonia. Symptoms may range from non-productive cough in 25-70% of cases, haemoptysis in 3-25% of cases and chest pain in 10% of cases. Radiological features include alveolar opacities resembling "snowflakes" in 45-60% of patients [5]. Effusions are less common. These findings generally resolve earlier than other bacterial pneumonias. In our patient, there

was isolated pulmonary involvement resulting in ALI, with good response to treatment, indicating that presentation as "atypical pneumonia" must be considered in vulnerable population during monsoon months and institution of timely appropriate antimicrobials may reduce the severity of the illness.

Pancreatic involvement in leptospirosis has been described. This is commonly seen in combination with acute kidney injury and multiorgan dysfunction and usually has a fatal outcome. Upto 65% of patients may have hyperamylasemia without any evidence of pancreatitis [5]. A common confounding factor in these cases is the presence of renal dysfunction which may cause increased levels of amylase without overt pancreatitis. Mild pancreatitis has also been reported in patients with leptospirosis however this has been in conjunction with renal involvement and jaundice.

Fig 1 (a):chest radiograph showing bilateral consolidation

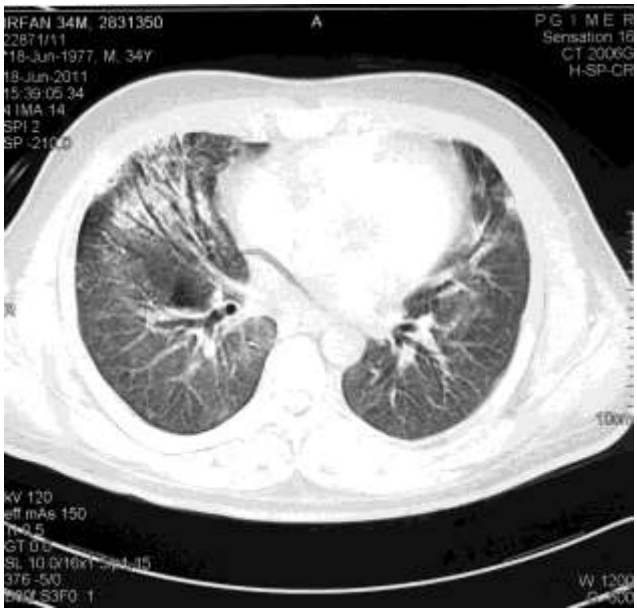

Fig 1 (b): Chest CT scan showing bilateral consolidation

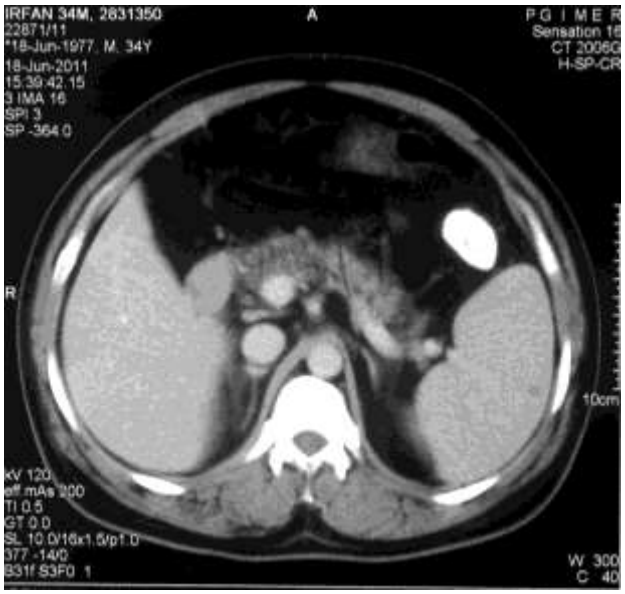

Fig 2: contrast enhanced CT scan of abdomen showing bulky pancrease with peripancreatic fat stranding

To our knowledge this is the first report of a patient of leptospirosis presenting with atypical pneumonia and radiologically documented but asymptomatic pancreatitis. Since there was no renal dysfunction, renal failure as a confounding factor can safely be eliminated in our patient. The exact pathophysiology of pancreatic involvement in leptospirosis is not yet clear but we postulate that

CONCLUSION

Leptospirosis is increasingly being recognized as cause of multiorgan failure during monsoon season in India. Less common presentations of leptospirosis must also be kept in mind while considering the differential diagnosis of atypical pneumonias and isolated hyperamylasemia in patients.

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