mentioned aetiological factors were excluded. Cases of acute pancreatitis with diabetic ketoacidosis have been reported with the use of some antipsychotic drugs such as olanzapine (4), but this patient denied use of such medications.

Severe diabetic ketoacidosis and hyperglycaemia with associated dehydration are known risk factors of acute pancreatitis (5). On admission, this patient had a low pH and high capillary blood sugar which probably were the risk factors in her case.

Failure to offer timely, appropriate management in this setting will result in an unfavorable outcome to mother and foetus. Treatment delay could lead to acute renal failure and disseminated intravascular coagulation in the mother and loss of the foetus. Prompt and accurate diagnosis with appropriate management resulted in a good outcome for the mother and the foetus in our case.

References

1. Pitchumoni CS, Vegneswaran B. Acute pancreatitis in pregnancy. *World J Gastroenterol* 2009; **15**(45): 5641-6.
2. Ramin KD, Ramin SM. Acute pancreatitis in pregnancy. *Am J Obstet Gynaecol* 1995; **173**: 187-191.
3. Shih-Yi Lin, Ya-Yu Wang. Gestational pancreatitis complicating uncontrolled diabetes mellitus. *Postgrad Med J* 1999; **75**: 241-3.
4. Khan D, Bourgeois JA. Acute pancreatitis and diabetic ketoacidosis in a patient taking olanzapine. *J Clin Psychopharmacol* 2007; **27**(4): 397-400.
5. Shigetazu N, Masutoshi M. Acute pancreatitis with diabetic ketoacidosis associated with hypermyoglobinaemia. *J Gastroenterol* 1996.

Dengue haemorrhagic fever presenting as acute acalculous cholecystitis: a case report

Dissanayake DRRHB, Fernando A, Lekamwasam JDVC

Teaching Hospital, Karapitiya, Galle.

Corresponding author; Dr. D.R.R.H.B. Dissanayake (ravidissanayake@gmail.com)

Introduction

Dengue fever is estimated to affect 100 million people annually worldwide, usually presents as a mild febrile illness and less frequently as a haemorrhagic fever with shock (1). Unusual clinical presentations that mimic other common emergencies can, however, occasionally occur (2). A high clinical suspicion is required to make an early diagnosis and initiate prompt treatment. If unrecognized, delay in treatment can lead to disastrous outcomes. Here we present an unusual clinical presentation of dengue fever mimicking a common surgical and gastroenterological emergency.

Case Report

A 49-year old female presented with a 4-day febrile illness associated with epigastric discomfort radiating to the right hypochondrium. The pain was dull and intermittent but increasing in intensity.

This was associated with generalized myalgia and weakness. She also complained of bleeding per vagina for two days.

She had no significant medical or travel history. At presentation she was tachycardiac, with a pulse rate of 100/min and a blood pressure of 90/60 mmHg. Clinically she was flushed and mildly dehydrated. Tenderness with guarding was elicited in the right hypochondrium, with a positive Murphy's sign. Rest of the abdomen was mildly distended but was soft. There was no skin rash and the systemic examination was normal. The clinical diagnosis of acute cholecystitis with septic shock was made.

The patient was resuscitated with intravenous crystalloids and started on intravenous ciprofloxacin therapy. Abdominal ultrasound scan confirmed the presence of a thickened gallbladder wall with a positive ultrasound Murphy's sign but there were no gallstones. No ascites was evident.

A full blood count revealed normal haemoglobin, haematocrit of 48%, and thrombocytopenia (platelet count; $26 \times 10^9/L$). Blood film showed reactive lymphocytic response suggestive of viral etiology. Liver function tests revealed ALT and AST of 304 and 315 U/L, respectively, with normal serum bilirubin and elevated alkaline phosphatase levels. Renal function tests, serum lipase, and arterial blood gases were normal.

Her blood pressure normalized with 1.5 L of normal saline (0.9% NaCl) and the haematocrit decreased to 39%. Although the clinical features and radiological findings of this patient were typical of acute cholecystitis, the abnormal blood count prompted us to perform serology for dengue (ELISA for IgM/IgG). Three blood cultures were negative but dengue virus IgM and IgG were positive.

The patient continued to have mild fever and a platelet count declined to $10 \times 10^9/L$ requiring platelet transfusions. Her symptoms began to subside on day 3 after admission, with recovery of the platelet count. She was discharged uneventfully on day 5, when platelet count was $85 \times 10^9/L$ and free of abdominal pain and fever for 48 hours.

Discussion

Dengue fever is an acute mosquito-transmitted disease caused by dengue virus and characterized by headache, myalgia, rash, and haemorrhagic manifestations. When associated with thrombocytopenia, evidence of plasma leakage, bleeding manifestations, it is termed dengue haemorrhagic fever. This is associated with a significant mortality without early appropriate treatment. Diagnosis often requires a high index of suspicion, especially in areas where dengue is endemic.

Abdominal manifestations of dengue fever include acute pancreatitis and fulminant hepatitis (2), and rarely acute cholecystitis (3-5). In our patient, initial presentation was more suggestive of acute cholecystitis than dengue fever. Thickening of the gallbladder wall, pericholecystic fluid and a positive ultrasound Murphy's test confirmed our diagnosis. Suspicion of dengue haemorrhagic fever arose due to thrombocytopenia and spontaneous bleeding seen in our patient. These features are uncommon in acute cholecystitis associated with gallbladder diseases unless the disease gets complicated with DIC.

Surgeons should be made aware of this unusual presentation in order to avoid any surgical intervention at the acute stage with thrombocytopenia which would be disastrous as it could lead to severe haemorrhagic complications.

References

1. Dengue: an escalating problem. Gibbons RV, Vaughn DW. *BMJ* 2002; **324**(7353): 1563-6.
2. Dengue hemorrhagic fever patients with acute abdomen: clinical experience of 14 cases. Khor BS, Liu JW, Lee IK, Yang KD. *Am J Trop Med Hyg* 2006; **74**(5): 901-4.
3. Dengue fever presenting as acute acalculus cholecystitis. Joshipura VP, Soni HN, Patel NR, Haribhakti SP. *J Indian Med Assoc* 2007; **105**(6): 338-9.
4. Acute acalculous cholecystitis in dengue haemorrhagic fever. Jaufeerally FR, Surrin SK, Chang PE. *Indian J Med Sci* 2007; **61**(11): 613-4.
5. Case of dengue virus infection presenting with acute acalculous cholecystitis. Goh BK, Tan SG. *J Gastroenterol Hepatol* 2006; **21**(5): 923-4.