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A case of Dengue fever complicated by acute pancreatitis

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Introduction

Dengue is the most rapidly spreading mosquito-borne viral disease in the world. In the last 50 years, the disease incidence has increased by 30-fold. It has also become a pandemic, involving the urban and rural populations. Worldwide, an estimated 50 million dengue infections occur annually. The South-East Asian region and the Western Pacific region bear 75% of the current global disease burden. Reported case fatality rates for the South-East Asian region is approximately 1%(1). Year 2010 had 34097 cases of Dengue in Sri Lanka resulting in 241 deaths. In 2011, 7948 cases of dengue were reported up to mid June, with 69 deaths (2).

We report of a case of Dengue fever complicated by acute pancreatitis. Review of PubMed and Cochrane databases revealed very few reported cases of acute pancreatitis in Dengue (3-6). In South Asia, this is the second reported case of Pancreatitis in Dengue infection (6).

Case report

A 35 year old male army soldier was transferred to National Hospital of Sri Lanka with fever of 4 days duration with upper abdominal pain. On admission there was flushing, icterus, hepatomegaly with epigastric and right hypochondriac tenderness and bilateral pleural effusions and ascites. There was no bleeding and the patient was haemodynamically stable. On the second day after transfer, his conscious level deteriorated and the GCS was 7/15. There was thrombocytopenia and the dengue IgM antibody was positive. Non contrast CT scan of the brain revealed mild cerebral oedema and the liver functions were of a hepatitis pattern.

He was managed in the Intensive Care Unit with the routine fluid management protocol for dengue, and the anti-liver failure regimen along with N-Acetyl Cysteine. Routine capillary blood sugar measurements detected hyperglycaemia, which was managed with insulin.

By the 8th day of the illness there was laboratory evidence of resolution of the hematological and hepatic diseases and the patient was fully conscious and rational. Yet there was persistent fever with upper abdominal pain and tenderness. The serum amylase at this point was found to be elevated to 1137 U/l which subsequently rose to 1800 U/l. Serum calcium was low at 2.0 mmol/l. Acute pancreatitis was confirmed by USS abdomen. The pancreatitis was managed conservatively with an uneventful recovery by the 13th day of the illness.

Discussion

Dengue virus (DEN) belongs to the genus Flavivirus, family Flaviviridae, comprising of four distinct serotypes (DEN-1 to 4). "Asian" genotypes of DEN-2 and DEN-3 are frequently associated with severe secondary dengue infections (1). Severe complications of dengue infection such as liver failure, encephalopathy, disseminated intravascular coagulation, myocarditis, acute renal failure, and haemolytic uraemic syndrome are rare but have been noted to be more frequent in recent epidemics (7). Pancreatitis in this patient could only be attributed to Dengue fever as there was no evidence of causal relationship to alcohol, gallstones, hypertriglyceridaemia or medications. Leptospira agglutination on lysis test done on day 12 of the illness gave an equivocal titre of 1:100 but there was no rising titre when the test was performed 2 weeks later.

Upper abdominal pain is usually found in dengue infection and in most instances is due to hepatitis. This case highlights the possibility of acute pancreatitis as a cause for upper abdominal pain in dengue fever.

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