



A Rare Presentation Of Dengue

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ABSTRACT

Dengue infection is one of the major infection causing morbidity and mortality in Indian sub-continent. Dengue infection is known to involve multisystem in the human species. Liver dysfunction is reported in few cases. We present the case of an adolescent boy who developed hepatic dysfunction due to dengue. We discuss differential Diagnosis and Management

KEYWORDS : Paederus, Vesicant, Irritant dermatitis, Kissing lesion

Background:
Dengue infection is an arboviral disease that is spread all over the world. The Chennai, a metropolitan city in south India is an endemic region. Early detection and treatment reduces the mortality below one percent [1]. Hepatitis is one of the complication of dengue infection which increases the mortality risk depending on the severity of the liver dysfunction. We present a case of 15 year old boy presented with Dengue fever complicated with Liver dysfunction.

Case report:
A 15 year old male, resident of Chennai presented to us in the month of October this year with three days history of fever associated with nausea and vomiting. There was no history of bleeding from any site. There was no history of alcohol intake or abuse in past and he was not exposed to any hepatotoxic drugs. There was no other significant past medical or surgical history. At the time of presentation the patient was febrile (100 F) and hemodynamically stable. He had icterus and mild right hypochondrial tenderness. Investigations revealed Hb of 13.5 gm%, TLC-4400/mm³ and thrombocytopenia (platelet count-72000/cu mm). Chest roentgenogram and ECG were normal. Ultrasonography of abdomen revealed gall bladder edema.

He had deranged liver functions (Serum Albumin-3.4, Total bilirubin-5.3mg/dL, direct bilirubin-3.2, SGPT-307, SGOT-385, Alkaline Phosphatase-286). His renal functions and electrolytes were normal.

Tests for viral serologies including IgM Anti HAV, HBsAg, IgM Anti HBC, Anti HCV and IgM Anti HEV were negative. Blood cultures revealed no growth. Serology for Leptospirosis and Widal test were negative. Peripheral smears for malaria was negative. In view of endemicity of dengue in Chennai, thrombocytopenia, gall bladder edema and hepatitis a diagnosis of dengue was suspected and a IgM dengue serology was obtained which was positive and NS1Antigen was positive.

The patient was treated with IV Fluids [DNS; NS; 25% DEXTROSE], T.Hepamerz 1 BD, T.Udiliv 300mg TDS, T.Rantac 150 mg BD, T.Platfast 1100MG BD (Papaya extract), Digene syrup. The patient was not given any Antibiotics and hepatotoxic drugs. Antipyretics were given judiciously. There was gradual improvement clinically as well as biochemically (Table: 1).

Table1					
DATE	3/10/16	6/10/16	8/10/16	10/10/16	12/10/16
PLATELET	72,000	1,41,000	1,53,000	2,49,000	2,34,000
PCV	42	40	38	38	39
SERUM BIL	5.3 (3.2/2.1)	4.2 (2.3/1.9)	2.7 (1.9/0.8)		1.2
AST	385	295	148		78
ALT	307	318	270		97
ALP	286	247	158		116

Patient was discharged and follow up was uneventful.

Discussion:
Dengue is caused by a viral infection which is transmitted by Aedes mosquitoes characterized by high grade fever, hemorrhagic manifestations and features of shock. However, in recent times the reports of rare manifestations of dengue have become more common and may include central nervous system manifestations (encephalopathy), liver and renal failure [2]. Liver enzyme elevations are common in dengue. Usually the SGOT levels are more than SGPT levels probably due to skeletal muscle injury. Occasionally jaundice is also seen [3]. Our patient had significant jaundice at presentation and elevated liver enzymes. It is notable that Hepatitis caused by hepatotropic viruses like Hepatitis A, B or C usually results in rise of SGLT levels more than SGOT.

Few reports of acute liver failure have come from across the globe. A study in pediatric population found that dengue was the most common cause of acute liver failure in Thailand [4]. Even from India reports indicate dengue as a common cause of acute hepatic failure in pediatric age group especially during periods of epidemic [5]. However the scenario in adult population is not as well established and dengue is not usually considered as a differential in patients of acute liver failure [6].

The differentials to be considered include acute viral hepatitis, malaria, leptospirosis, drug reactions (Table 2). In our patient the presence of a febrile illness, thrombocytopenia, liver enzyme elevations, gall bladder edema and serology were all consistent with possibility of dengue.

Table 2
Differentials of acute hepatic failure due to dengue

	VIRAL	MALARIA	LEPTOSPI- ROSIS	DRUG	DENGUE
HIGH GRADE FEVER	-	+	+	-	+
HEMAT- OCRIT	N	FALLS	N	N	RISES
SGPT	+++	+	+	+++	+++
ARF	-	+	+	-	-
PLASMA LEAK	-	RARE	-	-	++
PLATELET	N	FALLS	N	N	FALLS

Therefore our patient had evidence of dengue infection with liver dysfunction. Hence dengue should be considered as a possible cause of acute liver failure in endemic areas if other viral markers are negative. The Management is primarily supportive and the outcome is usually good. Care must be taken regarding the diagnosis and use of drugs which may worsen the liver damage [7].

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