



INCIDENCE OF ACALCULUS CHOLECYSTITIS IN DENGUE FEVER - A PROSPECTIVE STUDY

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ABSTRACT

Dengue Fever (DF) is a disease of the tropics. Dengue fever is one of the most prevalent arbo-viral diseases linked to single-stranded RNA –flavivirus. The mosquito bite transmits it. The female mosquito *Aedes aegypti* is the vector. Dengue fever is a febrile condition which is non-specific and self-limiting. The diagnosis can vary from asymptomatic to dengue fever, dengue hemorrhagic fever and shock syndrome with dengue. Occasionally rare presentations like acute acalculus cholecystitis are described. It can be viewed as an emergency surgery. Patients present with symptoms of right upper quadrant pain and positive sign of murphy in acute acalculus cholecystitis.

KEYWORDS :

INTRODUCTION :

Dengue Fever (DF) is a transmitted mosquito, arbo virus disease caused by a flavivirus. In most areas of Southeast Asia, DF is endemic. Over the past four decades, the incidence of dengue fever with its complications has risen 30 folds worldwide, and more than half of the world's population (including developed countries) is now infected with dengue virus disease. In India, the National Institute of Communicable Diseases, New Delhi, has registered more than 50 outbreaks since 1963. Infection with the dengue virus presents with a number of clinical symptoms, including asymptomatic and moderate to life-threatening disease with hemorrhagic manifestations. Specific atypical forms of dengue virus infection have been identified in recent years, including fulminant hepatitis, cardiomyopathy, encephalopathy, acute pancreatitis and acalculous cholecystitis. The current study is a prospective study of the occurrence of acalculus cholecystitis in Sree Balaji Medical College and Hospital admitted patients with dengue fever.

OBJECTIVE:

To assess the incidence of acute acalculous cholecystitis in dengue fever patients.

METHODS :

STUDY DESIGN :

The current study is a prospective study to determine the incidence of acute acalculus cholecystitis in dengue fever patients.

STUDY POPULATION:

This study included 50 Dengue IgM antibody positive patients, admitted in Sree Balaji Medical College And Hospital.

EXCLUSION CRITERIA

1. Patients with history of DM, TB, cirrhosis of liver, viral hepatitis, congestive heart failure, chronic kidney disease and hypoalbuminemia.
2. Patients with past history of cholecystitis

METHODS:

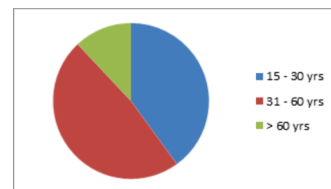
Fifty patients admitted with the diagnosis of dengue fever were included. The diagnosis was according to the clinical manifestations and laboratory investigations. The diagnosis was confirmed by a positive IgM antibody test. Abdominal ultrasound was performed in patients admitted for dengue fever. Liver function tests, complete blood counts were determined. The diagnosis of acute acalculous cholecystitis

was made according to clinical features and sonographic findings. The sonological evidence of acalculus cholecystitis included thickened gallbladder wall which is defined as wall thickness of > 3.5 mm; pericholecystic fluid collection; a positive sonographic murphy's sign, which is defined as maximum tenderness of the sonographically localized gallbladder, and no gallstones.

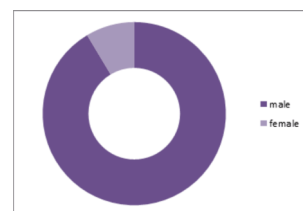
RESULTS:

The total number of patients with dengue fever included in the study were 50.

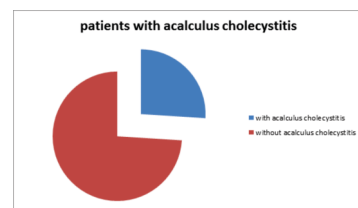
- Age distribution of dengue fever patients :



- Sex distribution of dengue fever patients :



- Incidence of acalculus cholecystitis in dengue fever patients



The number of patients with the complication of acute acalculus cholecystitis diagnosed based on clinical features and sonographic findings were 13. The incidence of acalculus cholecystitis in dengue fever patients were 26%. There were 4 male and 9 females.

All of the patients recovered fully with conservative line of

management with none requiring any surgical intervention.

DISCUSSION :

In our nation, dengue is a common mosquito-borne viral disease. About 3 billion people worldwide live in areas at risk of dengue transmission. High fever, nausea, musculoskeletal pain, retro-orbital pain, and rash are among the medical symptoms of dengue fever. Abdominal pain is considered one of dengue's warning signs. Dengue fever is correlated with many unusual features. Acalculous cholecystitis, with increased incidence, is the newly reported complication. The pathogenesis of acute acalculous cholecystitis remains uncertain, but the proposed possible causes are cholestasis, with elevated bile viscosity from excessive rapidity, ampulla of Vater spasm, inflammation, toxemia, and ischaemia-reperfusion injury. Acalculous cholecystitis should be reported in a person with abdominal pain or fever with a positive sign of Murphy, a slight increase in transaminase rates and a thickened lining of the gallbladder without ultrasonography gallstones. The path of DF could be self-limiting in DF clinicians with severe acalculous cholecystitis. In a dengue fever case aggravated by acalculous cholecystitis, cholecystectomy is rarely needed. But for any symptoms of perforation, the patient should be carefully examined. If required, the management line is helpful intervention with sufficient hydration, antipyretics and platelet transfusion. A procedure should be made for abdominal ultrasonography as it allows to spot this easily manageable condition early.

CONCLUSION:

A significant proportion of patients with dengue fever had seen the risk of severe acalculous cholecystitis. Through cautious treatment, all patients have improved. Therefore, this study shows that the conservative management line can be used in DF instead of surgery for patients with acute acalculous cholecystitis. Abdominal ultrasound should be made mandatory in all dengue fever cases.

REFERENCES :

1. Srikiatkachorn A, Krautrachue A, Ratanaparakarn W, et al. Natural history of plasma leakage in dengue hemorrhagic fever: a serial ultrasonographic study. *Pediatr Infect Dis J*. 2007; 26:283-90.
2. Bhatti S1, Shaikh NA, Fatima M, Sumbhuani AK. Acute acalculous cholecystitis in dengue fever, *J Pak Med Assoc*. 2009 Aug;59(8):519-21
3. Zulkarnain I. Gallbladder edema in Dengue hemorrhagic fever and its association with haematocrit levels and type of infections. *Acta Med Indones*. 2004 Apr-Jun;36(2):84-6
4. George R, Liam CK, Chua CT, Lam SK, Pang T, Geethan R, Foo LS. Unusual clinical manifestations of dengue virus infection. *Southeast Asian J Trop Med Public Health* 1988; 19: 585-590
5. Khanna S, Vij JC, Kumar A, Singal D, Tandon R. Dengue fever is a differential diagnosis in patients with fever and abdominal pain in an endemic area. *Ann Trop Med Parasitol* 2004; 98: 757-60