



INCIDENCE, CLINICAL FEATURES, MANAGEMENT AND OUTCOME OF ACUTE ACALCULOUS CHOLECYSTITIS IN DENGUE FEVER PATIENTS

General Medicine

Dr Mir Nadeem

Dr Mir Waseem

Dr Tariq A Mir

Sajad Ahmad Bhat

Dr Gh Hussain Mir

Dr Poonam Dagar

KEYWORDS

1. Introduction

Dengue Fever (DF) is a tropical disease caused by enveloped single stranded RNA flavivirus that is transmitted by the bite of female *Aedes aegypti* mosquito(1). Dengue fever is usually non-specific and self-limiting, biphasic febrile illness but the presentation may range from being asymptomatic to dengue fever, dengue hemorrhagic fever and dengue shock syndrome(2). Typical dengue fever is characterized by high- grade fever, musculoskeletal pain, retrobulbar headaches, joint pain, nausea, vomiting and morbilliform rash(2). Headache and abdominal pain are common manifestations(2-4) Dengue is widely distributed in many countries in southeast and southern Asia, Central and South America, and the Western Pacific regions.(5) the incidence of dengue fever and dengue haemorrhagic fever (DHF) has increased thirty folds globally in the last four decades and more than half the world's population (including developed countries) is now threatened with infection from dengue virus .

Dengue fever is one of the commonest arbo-viral diseases around this part of the world with sudden increase in the number of cases observed in recent years. In most of the cases it is asymptomatic, or presents with features common to any viral infection. Only some time though it presents with unusual presentations where it may be interpreted as a surgical emergency. Acute acalculous cholecystitis is one such atypical presentation(6), where patient presents with features typical of cholecystitis like right upper quadrant pain, with tenderness over RUQ, murphy's sign positive. On investigating: USG shows increased wall thickness, pericholecystic collections etc. Acute cholecystitis is usually treated by cholecystectomy, in this setting of cholecystitis with dengue is it wise to go ahead with routine procedure of surgery , especially keeping in mind thrombocytopenia , hemorrhage , shock associated with dengue fever which may complicate the situation further(7)

2. Objective To investigate the frequency, clinical features, management and outcome of acute acalculous cholecystitis in dengue fever patients.

3. Material and methods This is a retrospective study done from period July 2017 to nov 2017 in SGT medical college medicine department . Patients diagnosed with dengue fever (DF) on clinical assessment, blood samples were collected and tested for antibodies against dengue antigen for confirmation. Either IgM, ns1 antibody or serial testing with 4-fold increase in IgG antibody levels were taken as criteria for confirmation for dengue fever. These patients were serially monitored for vitals – pulse rate and blood pressure and development of any other symptoms. The patients, who developed abdominal pain over RUQ with tenderness and positive Murphy's sign, were subjected to USG abdomen. If sonological evidence of acalculous cholecystitis - thickened gallbladder wall (defined as wall thickness > 3.5 mm), a positive sonographic murphy's sign (defined as maximum tenderness of the sonographically localized gallbladder), peri cholecystic fluid collection, and no stone(s) in the gallbladder were also noted, and then diagnosis of acute acalculous cholecystitis was made.

4. INCLUSION CRITERIA

1. Indoor patients diagnosed with dengue (positive IgM and ns1 dengue serology).
Patients having manifestations of dengue fever for the first time.

5. 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 dengue.
3. Patients with past history of cholecystitis.

6. Results

The mean age of patients was 45.2±15.1. Most common age group was 25-40 years with 38.4% patients belonging to this group and next 30.1% belonging to 40-60 years age group. Out of a total of 300 patients, 180 (66.8%) were females and 120 (33.2%) were males. Among patients with dengue 267(89%) patients had thrombocytopenia 95 (31.8%) patients had mild thrombocytopenia with platelet count between (1 lakh to 1.5 lakh) another 172(57.5%) patients had moderate thrombocytopenia with platelet count between (25 thousand to 1 lakh) and while as 33(11.7%) patients had severe thrombocytopenia with platelet count of less than 25 thousand. 186 (62%) patients had deranged liver enzymes in form of transaminitis with severe hepatitis seen in 16(5.1%) .Number of patients with the complication of acute acalculous cholecystitis on clinical grounds and confirmed USG abdomen reports were 24(8%). The incidence observed was 8%. Mean period of stay for patients developing this complication at hospital was 7.1 days as against 3.4 days who developed no complication. All of the patients recovered fully with conservative line of management with none requiring any surgical intervention.

6. Discussion:

The occurrence of acalculous cholecystitis in dengue is though rare but serious complication of dengue fever and early diagnosis on high clinical suspicion and radiological evidence and management is key step in avoiding complication and mortality related to disease The mean age of 45.2±15.1 years in our study matches with that of **Khan et al(8)** and **KENG-LIANG WU et al(9)** Most of the patients belonged to age group 25 to 40 years which was also seen in study conducted by **Lal Darbari et al(10)** . In our study group 267(89%) of patients had thrombocytopenia also coincides with the results found in study done by **Tamil Selvan et al(11)**. Patients having hepatic involvement in our study population in form of transaminitis was 186 (62%) this finding of our research was supported by study conducted by **Sombat Treprasertsuk et al(12)**. Acalculous cholecystitis need to be suspected in a case of dengue fever when patient complains of abdominal pain, fever, and there is a positive Murphy's sign on examination with lab investigation showing mild elevation of transaminases and a thickened gallbladder wall without stones on ultrasonography. In dengue fever complicated by acute acalculous cholecystitis, the course of disease could be self-limiting and the

gallbladder wall could return to normal after several days, Cholecystectomy in such patients is rarely needed but patient should be closely observed for signs of perforation. acalculous cholecystitis though rare but is a serious complication of dengue fever and needs early diagnosis and prompt management to decrease mortality. In our study group we found 24 patients (8%) had acute acalculous cholecystitis which was supported by the research done by Sreeramulu PN et al(13). Patients were managed conservatively in medicine department and patients improved with time period of 7 days to 14 days The study thus validates the conservative line of management for patients with acute acalculous cholecystitis in DF, instead of going ahead with cholecystectomy, which can be challenging in the given setting with possible thrombocytopenia, hemorrhage, shock seen with dengue fever

7. Conclusion :

Acute acalculous cholecystitis is one of the atypical presentations in patients with dengue fever being seen in about 7.12 percent of patients which need prompt evaluation and diagnosis.

:Management of acalculous cholecystitis usually in setting of dengue fever is conservative with antibiotics, intravenous fluids, analgesics, regular monitoring being sufficient in managing this complication with no need for surgical intervention.

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