

# Dengue Fever Outbreak in Surgical Patients: Diagnostic Challenges and Outcome Impact, 2014

**Prabhu Singh, Rahul, Saket Kumar and Abhijit Chandra\***

*Department of Surgical Gastroenterology, King George's Medical University, India*

**Submission:** February 28, 2017; **Published:** March 22, 2017

**\*Corresponding author:** Abhijit Chandra, Department of surgical gastroenterology centenary hospital King George's Medical university, Lucknow (UP), India, Tel: 7897240453; Email: drprabhusswami@gmail.com

## Abstract

**Background:** Dengue fever has re-emerged as a major arboviral infection in tropical countries. Its presentation in surgical patients has not been described where it becomes a diagnostic dilemma.

**Methods:** Six inpatients were diagnosed with Dengue fever in Surgical Gastroenterology ward in October and November 2014. All were evaluated with serial blood investigations and managed accordingly.

**Results:** Three of 6 patients developed Dengue Hemorrhagic Fever (DHF). Two patients succumbed to the illness. Definitive surgery was prolonged in another two.

**Conclusion:** Dengue fever should be suspected in all patients with postoperative rise of temperature, particularly in endemic regions.

**Keywords:** Dengue fever; Thrombocytopenia; Perioperative; Ascites; Bleeding

**Key Message:** Dengue fever should be suspected in all patients with perioperative rise of temperature, particularly in endemic regions. During an outburst of Dengue, a clinician should refrain from using non steroidal anti-inflammatory drugs (NSAIDs) for pain control.

## Introduction

Dengue fever has re-emerged as a major arboviral infection in tropical countries [1]. It is a mosquito borne disease transmitted by *Aedes aegypti* [1]. There are five serotypes [2]. Clinical presentation varies from subclinical infection to high grade fever and even hemorrhagic shock [3]. Diagnosis of dengue is challenging when it presents with acute abdomen [1]. Dengue has been described during pregnancy [4] and after organ transplantation [5]. It adds to the morbidity in these conditions. Dengue fever complicating surgical gastroenterology patients has not yet been described. It is a diagnostic dilemma in this group, especially in post-operative period. Through this report, we intend to share our experience of managing peri-operative dengue fever.

## Method

Six inpatients were diagnosed with Dengue fever in October and November 2014. The diagnosis was sought on high index of suspicion for unexplained fever or bleeding episodes with thrombocytopenia. All the patients underwent Dengue serology (IgM) using ELISA kit for confirmation. Details of the hospital stay, morbidity, outcome and mortality were recorded.

## Case History

During the study period, six patients were diagnosed with dengue fever. All of them had fever, thrombocytopenia and positive dengue serology. Three patients (50%) developed bleeding manifestations and two of them succumbed to the illness (Table 1).

**Table 1:** Distribution of surgical complications in patients with dengue fever.

Complications	No. of patients	Percentage
Fever	6	100%
Thrombocytopenia	6	100%
Surgical wound bleed	2	33.3%
Upper GI bleed	1	16.6%
Seizure	2	33.3%
Ascites	1	16.6%
Mortality	2	33.3%

Hospital stay was prolonged in rest of the four. The details of these patients are as follows:

a) A 22 year female admitted as a case of adhesive obstruction underwent laparotomy. On postoperative day (POD) 3, she developed high grade fever. Complete blood count (CBC) revealed thrombocytopenia. Non-steroidal anti-inflammatory drugs (NSAIDs) were stopped immediately. She developed increased drain output, bleeding from the surgical wound and generalized itching on day 4 of fever. Dengue serology turned out to be positive. She was managed with intravenous fluids, paracetamol and component transfusion. Platelet levels recovered after day 6 of fever. She responded to conservative management and was discharged on POD 12.

b) A 65 year male underwent CBD exploration for failed endoscopic clearance. He was planned for discharge when he developed high grade fever, followed by bleeding from surgical wound. His investigations revealed thrombocytopenia and positive dengue serology. Patient developed seizures on day 3 and finally succumbed to the illness.

c) Another case of carcinoma stomach (45 year female) developed high grade fever during hospital stay. Her dengue serology was positive. On day 5 of fever, she developed hematemesis, melena and petechiae. Gastroduodenoscopy revealed multiple hemorrhagic spots in stomach oozing actively. She was transfused single donor platelet (SDP) and blood, but finally went into hemorrhagic shock and expired.

d) Another 30 year male patient was admitted with diagnosis of acute enterocolitis. He also developed high grade fever on day 5 of admission. Diagnosis of dengue was confirmed on serology. He recovered on conservative management.

e) An elderly male (74 years), being evaluated for high grade dysplasia esophagus, developed high grade fever. He was ELISA positive for dengue. He recovered over next 10 days and required SDP. The definitive surgery was delayed by one month.

f) Similarly, definitive treatment was delayed in a patient of gall-bladder cancer who suffered from dengue fever with one episode of seizure.

### Discussion

Dengue fever is an important public health problem. Majority of the patients respond to resuscitative measures, but a few that land up in hemorrhagic manifestations, require aggressive support. Early suspicion and diagnosis becomes more important in the post surgical patients, who are usually

on NSAIDs for pain control. An added insult on thrombocytes by dengue can prove deleterious. Moreover, in a surgical ward, dengue is not the first suspicion of new onset fever. Bleeding as a complication thus becomes a more common presentation. In our report 50% patients had a bleeding manifestation; otherwise the reported incidence is 5-30%<sup>3</sup>. The increased incidence of dengue hemorrhagic fever in surgical patients reflects as increased mortality, as in our report (33%, 2/6).

One patient, who was recovering after CBD exploration, had received 4 days of NSAIDs post-operatively. The other patient had a malignant ulcer in the stomach which bled to death due to thrombocytopenia. Taking lessons from the two mortalities, we shifted to opiates for pain control in all our patients during the outbreak.

Dengue fever delayed the definitive management of two patients and prolonged the hospital stay in others. This adds to the total cost of treatment. A delay of 3-4 weeks in surgery may render malignant diseases unresectable. One should be vigilant enough and suspect dengue as an important cause of fever in a surgical ward, especially in patients with increased drain output or surgical site bleeding. Early diagnosis is the key to decrease morbidity and mortality.

### Conclusion

Dengue fever should be suspected in all patients with perioperative rise of temperature, particularly in endemic regions. During an outburst of Dengue, a clinician should refrain from using non steroidal anti-inflammatory drugs (NSAIDs) for pain control.

### References

1. Ahmad F, Ahmad N, Muhammad F (2013) Management experience of surgical complications of dengue fever patients at Hameed Latif Hospital, Lahore. *Annals* 19(1): 49-54.
2. Mustafa MS, Rasotgi CV, Jain S (2015) Discovery of fifth serotype of dengue virus (DENV-5): A new public health dilemma in dengue control. *Medical journal armed forces India* 71(1): 67-70.
3. Chiu YC, Wu KL, Kuo CH, Hu TH, Chou YP, et al. (2005) Endoscopic findings and management of dengue patients with upper gastrointestinal bleeding. *Am J Trop Med Hyg* 73(2): 441-444.
4. Bunyavejchevin S, Tanawattanacharoen S, Taechakraichana N, Thisyakorn U, Tannirandorn Y, et al. (1997) Dengue hemorrhagic fever during pregnancy : ante partum, intra partum and post partum management. *J Obstet Gynecol Res* 23(5): 445-448.
5. Prasad N, Bhadauria D, Sharma RK, Gupta A, Kaul A, et al. (2012) Dengue virus infection in renal allograft recipients: a case series during 2010 outbreak. *Transpl Infect Dis* 14(2): 163-168.



This work is licensed under Creative Commons Attribution 4.0 License  
DOI: [10.19080/OAJS.2017.02.555603](https://doi.org/10.19080/OAJS.2017.02.555603)

## Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats  
**( Pdf, E-pub, Full Text, Audio)**
- Unceasing customer service

Track the below URL for one-step submission  
<https://juniperpublishers.com/online-submission.php>