



Hypotension- Diagnostic & Prognostic Value In Simple Dengue

KEYWORDS

hypotension, dengue fever, thrombocytopenia.

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ABSTRACT

INTRODUCTION: Dengue is major cause of morbidity and mortality in tropical regions. Hypotension is the most common complication in dengue fever.

AIM: Our study aims to depict the importance of hypotension in simple dengue fever.

METHODOLOGY: This is a cross sectional study which was carried out in a Govt Medical College, RIMS, Kadapa. Dengue fever was diagnosed by IgM or NS1Ag detection. Patient's blood pressure and platelets were monitored for 3 days.

RESULTS: Sample size was 90. Mean age of patients included were 32. Males were more than female patients. Out of 90 patients 30 were recorded with hypotension and 76 were recorded with decreased platelet count. Out of 30 patients with hypotension 27 showed increased platelet count as hypotension improved and one patient left the hospital and two patients developed complications.

CONCLUSION: Our study shows that hypotension can be used as a prognostic marker in dengue fever.

INTRODUCTION

Dengue is caused by Aedes¹. The incidence of dengue fever has increased recently due to outbreak. Hypotension is the most common cause of morbidity and mortality in dengue fever. Dengue is a single stranded RNA virus of genus Flavivirus. It contains 4 serotypes. DEN 1 to DEN 4. DHF is due to secondary infection with serotype other than the initial serotype. Antibody dependent immune enhancement is responsible for DHF. Vascular changes in dengue include vasodilation, congestion, perivascular haemorrhage and edema of arterial wall.

Thrombocytopenia in simple dengue is thought to be caused due to 1) DV antigen attached to human platelets without immune-mediated reaction, (2) a decrease in platelet count was more markedly demonstrated by the binding of anti-DV antibody on the DV antigen associated with platelets than by the binding of the antigen-antibody complex on platelets, (3) a modulation of endothelial cell by the infection of DV to the cell was suggested as one of the causes of the thrombocytopenia².

Hypotension in simple dengue is thought to be due to capillary leak into the third space resulting in ascites, pleural effusion, pericardial effusion³.

METHODOLOGY

This is a cross sectional study done in Department of general medicine, RIMS medical college, Kadapa for a period of six months between april 2015 to September 2015. A consecutive sample of patients were recruited from the in-patient department with confirmed dengue infection.

Patient demographic details were collected based on the prestructured questionnaire, and the clinical history collected, and physical examination was done. The patients were

collected based on the following inclusion and exclusion criteria.

INCLUSION CRITERIA:

- 1) patients between 18-60 years of age
- 2) patients with fever, diagnosed by IgM and NS1Ag detection.

EXCLUSION CRITERIA:

- 1) patients with history of fluid loss due to vomitings, loose motions, starvation
- 2) patients with known hypertension and coronary artery disease
- 3) patients with bleeding diathesis suggestive of DHF

Patients demography were collected and followed for 5 days. Blood pressure, platelet count and labs were monitored regularly.

RESULTS:

The sample size was 90 patients. Majority of the patients were males (n=58), when compared to females(n=32). The diagnosis was confirmed by IgM and NS1Ag detection⁴. The mean age was 32. Complete data of hypotension and platelet count was available. Hypotension was detected in 30 patients in whom the mean blood pressure was calculated to be 86/64 mm Hg on day 1. Thrombocytopenia was detected in 76 patients in whom the mean platelet count was 68,000 on day 1.

Out of 30 patients with hypotension the mean platelet count was 35,000 on day 1. On day 3 the mean blood pressure was improved to 110/84 mm Hg. among the hypotensive group and the mean platelet count was increased to 1.8 lakhs/cu.mm.

27 patients improved with the in hospital treatment with conservative management and 2 patients were landed in complications with severe dengue and 1 patient lost to our follow up.

DISCUSSION:

Dengue was the most prevalent mosquito borne infectin in the most with epidemics. . Approximately 2.5 billion people live in dengue-risk regions with about 100 million new cases each year worldwide⁵.

In India, the first epidemic of clinical dengue-like illness was recorded in Madras (now Chennai) in 1780 and the first virologically proved epidemic of dengue fever (DF) occurred in Calcutta (now Kolkata) and Eastern Coast of India in 1963-1964. During the last 50 years a large number of physicians have treated and described dengue disease in India, but the scientific studies addressing various problems of dengue disease have been carried out at limited number of centres⁶

To our knowledge this is the first study evaluating the association between the hypotension and platelet count in simple dengue fevers. The mean blood pressure in hypotensive group was too low so that the patients were monitored regularly and watched for the complications regularly. Platelet count also monitored regularly in all the patients but utmost importance was given to the hypotensive group in whom the mean platelet count was low.

At present there were no clinical trials evaluating the efficacy of association between the hypotension and platelet count

CONCLUSION:

Our study reveals that hypotension can be used as a diagnostic and prognostic value in patients with simple dengue. Platelet count and general condition of the patient improved with blood pressure improvement.

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