



**ORIGINAL RESEARCH PAPER**

**Medicine**

**BONE BREAKING FEVER – BREAKING NORMS  
DREADLY DENGUE FEVER NO LONGER A  
SEVEN DAY FEVER**

**KEY WORDS:**

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**INTRODUCTION:**

Dengue hemorrhagic fever is caused by dengue virus of 4 serotypes. Dengue 1,2,3,4 and belong to family of flaviviridae. Japan was not only the target of atomic bomb during the world war-2 but also a large dengue epidemic bomb. Between 1942 and 1944 in Nagasaki-japan a total of 23338 cases were reported. Because of the increase of air travel to tropics and subtropics, the dengue virus infection has spread from japan to other south east asian countries.

1<sup>st</sup> recognized dengue epidemics in 1780 but 1<sup>st</sup> confirmed case report dates from 1789 and is by Benjamin Rush ,he coined the term breakbone fever because of symptoms of myalgia and arthralgia. In 1828 it was named as dengue fever.

40% of old population(1.8 billion) are having risk of dengue transmission .South east Asia is representing large epidemics of the disease nowadays, though the origin of the disease is from south Africa. In general case mortality of dengue varied from 10-15% to <1% to others.

**OBJECTIVES :**

To study the atypical complications of dengue after the 9<sup>th</sup> day of fever

**MATERIALS AND METHODS:**

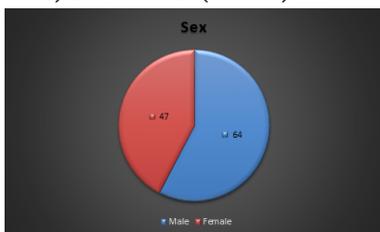
**STUDY DESIGN:** Retrospective case control study

**STUDY SETTING:** ICU unit in tertiary care teaching hospital –PESIMSR, KUPPAM

**STUDY POPULATION:** Patient who have been diagnosed as dengue-110 patients .They will be stratified into 2 categories – a. typical and atypical features, b. no mortality and mortality.

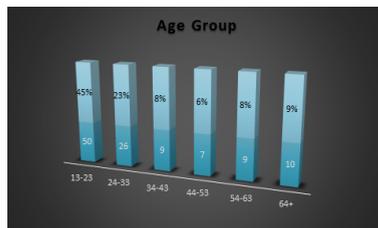
**RESULTS:**

A total of 110 patients admitted with diagnosis of dengue fever during the period under study. Among whom there were 64 male(56.36%) and 47 female(43.64%).

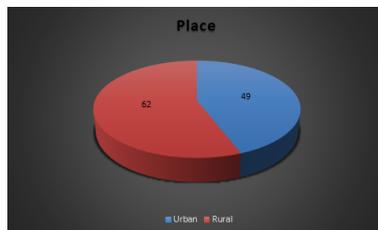


According to age criteria, there were 50 patients (45%) between 13 to 23 years,23 patients(26%) were between 24 to 33 years,8 patients(9%) were between 34 to 43 years,7 patients(6%) were between 44 to 53 years,9 patients (8%)

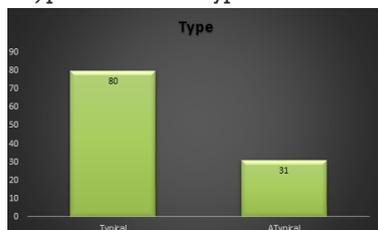
were between 54 to 63 years,10 patients (9%) were more than 64 years.



According to geographical distribution,62 patients (56%) were from rural areas, 49 patients (44%) were from urban areas.



Among 110 dengue patients based on clinical presentation , 80 patients(81%) presented with typical features and 31 patients (19%) presented with atypical features.



Among 31 patients with atypical features ,2 patients developed fatal hemorrhages after the 11<sup>th</sup> day,2 patients developed ARDS after 9<sup>th</sup> day , 4 cases of severe obstructive jaundice after 8<sup>th</sup> day and persisted for more than 15days , 1 case presented with 1<sup>st</sup> degree AV block , increase of AST and ALT suggestive of hepatitis in 5 cases, 1 case of DIC and 6 cases of acalculous cholecystitis. As per WHO guidelines the list of presentation of atypical or unusual manifestations are termed expanded dengue syndrome. in our expanded dengue syndrome there were no presentation of acute pancreatitis , renal failure, encephalitis, seizure, atrial fibrillation and also acute parotitis. no other neurological manifestations of mono neuropathy, poly neuropathy, gullian barre syndrome, ADEM and transverse myelitis.

Severe abdominal pain were present in 13 cases of dengue

fever 2 cases succumbed to death out of 110 cases



**DISCUSSION:**

Dengue known to be caused by dengue virus, flaviviridae-imposes economic and social burden. Early detection and careful monitoring of dengue cases – prevent undue mortality and morbidity. This current study is unique in the sense more than 5% of cases caused problem after 7<sup>th</sup> day of fever. The problems are fatal hemorrhages in 2 cases after 10<sup>th</sup> day, 2 cases of ARDS of which one lady succumbed after 9<sup>th</sup> day of dengue fever and 4 cases of severe obstructive jaundice after 9<sup>th</sup> day, 1 case died of DIC after 9<sup>th</sup> day. Early recognition and followup definitely enhances better outcome but after attaining all normality in all the values at the day of 7, the problem arose after 9<sup>th</sup> day.

We have studied 110 dengue cases admitted in a teaching hospital - PESIMSR ,kuppam from may 2017 to nov 2017 based on the clinical findings and the outcome of all the patients with the diagnosis of dengue with the following criteria.

**Diagnostic criteria:**

1. clinical presentation-fever, myalgia, headache, arthralgia, skin rash, retro orbital pain, hemorrhagic manifestations.
2. confirmation by - Dengue NS1, Anti IgM and IgG Sero types not studied because of non availability

Present study was analysed for a brief period of 6months This study was based on clinical and lab support with daily monitoring of vitals and monitoring of any systemic involvement from day 1 to day 7 as it is called as seven day fever

**Definitions According To Dengue Fever :**

1. Hospital stay-for a period of 7 days
2. Mortality-death within 14 days
3. Hypotension-BP less than 110/70mmhg
4. If AST,ALT rise, prothrombin >15sec,urine routine showing hematuria, proteinuria, pyuria, urine epithelial cells indicate complications. Common atypical complications are acute pancreatitis , febrile diarrhea, hepatitis ,renal failure, acalculous cholecystitis , myositis , ARDS,myocarditis.
5. Multi organ dysfunction: More than 2 organs involvement

**The Discjarge Criteria Was Formulated With The Following Criteria:**

1. No fever for >48hrs without antipyretics
2. Improvement in clinical status (general well-being, appetite, haemodynamic status, urine output, no respiratory distress)
3. Increasing trend of platelet count (reaches 1lakh)
4. Stable haematocrit without intravenous fluids
5. LFT,RFT were normal
6. No bleeding manifestations like petechiae, epstaxis, malena.

Management regimen adapted :

1. Iv fluid care
2. Platelet transfusion
3. FFP

In this study we have stratified study population into2 categories-

- 1.typical and atypical features,2.No mortality and mortality.

In this study we analysed results according to age wise,sex wise,urban/rural area wise,typical and atypical clinical features.

**CASE REPORT:**

1. Subbamma,68 year old admitted on 17-11-2019 with complaints of fever since 3days intermittent , associated with chills , severe body pain and arthralgia , headache since 3days.No chest pain , palpitations ,shortness of breath. on examination vitals-normal, temp-100 f but platelet count 13,300. Dengue IgM positive , on 18-11-2019 platelet count improved to 14,410.Prothrombin time-14.5,INR-1.0. on 25-11-19 platelet count returned to normal(2,15,000).serum sodium, potassium, glucose, bicarbonate all were normal. Patient was hemodynamically stable and about to discharge on 8<sup>th</sup> day. Patient all of a sudden developed dyspnea immediately chest xray was taken which showed bilateral heterogenous opacities suggested ARDS , pao2/fio2 less than 200 .Patient was intubated. This is an atypical presentation .Patient about to be discharged developed ARDS on the 8<sup>th</sup> day of illness.
2. Mrs. Ambika , 23 year female admitted on 5-12-2019.A primigravida with 26 weeks of gestation with severe dengue fever – IgM positive. She presented with fever high grade, intermittent, associated with chills. she was treated in outside hospital and she was an inpatient there for 8 days. on 8<sup>th</sup> day she developed difficulty in breathing.so she was referred to tertiary hospital for further management. on examination patient is dyspneic ,tachypneic ,bilateral basal crepts. on admission platelet count is 10,610. Chest xray showed features of ARDS, patient started with meropenam, Tamiflu and diuretics. Then patient was intubated. After 4days patient was extubated , symptomatically better. Hence discharged from the hospital. This is the 2<sup>nd</sup> case of ARDS after 8<sup>th</sup> day of dengue fever.
3. Shilpa,28 year female G2P1L1,30 weeks of pregnancy diagnosed with dengue fever. Dengue IgM,IgG,NS1 positive with thrombocytopenia and bleeding manifestations. On admission platelet count was 10,500.total 11 units of platelets were transfused and 1 unit of PRBC was transfused in view of low HB. During the hospital stay LFT was deranged. Gynaec opinion was obatained for jaundice nad HELLP syndrome was ruled out. Patient developed conjugated bilirubinemia (4.7).usg abdomen and pelvis showed splenomegaly, B/L minimal pleural effusion. After 7thday conjugated bilirubin raised to 5.1mg.Next day conjugated bilirubin raised to 7.5mg.This a atypical presentation of jaundice .

**CONCLUSION:**

Usually all the dengue cases kept in icu and wards for 5-6 +/- 2 days(1 to 8 days).In this study mostly 80% of admitted cases were suffering from 1. Fever , 2.headache , 3.skin rash, 4.myalgia, 5.thrombocytopenia , 6.retro orbital pain , 7.tornique test positive.

In remaining 20% of admitted cases, manifestations are devastating like 1. acalculous cholecystitis, 2.obstructive jaundice, 3.AARDS, 4.cardiac conduction abnormalities .These complications occurred after 9<sup>th</sup> day of dengue fever and the serotypes causing these atypical manifestations after 10<sup>th</sup> day of dengue illness has not been evaluated, because of non availability of serotype studies in our hospital. Finally this study gives awareness that dengue fever – 7days fever should not be prematurely discharged on 7<sup>th</sup> day itself. Hospital stay should be extended until 10<sup>th</sup> day of dengue fever because above mentioned complications occur after 9<sup>th</sup> day of illness.

Dengue is a human made water logged disease so additional measures like eradication of larvae of mosquitoes and recent antidengue drugs which are in phase 1 and phase 2 trial like

1. Chloroquine
2. Celgosivir
3. Balapiravir
4. uv-4B9

can be effectively put into use to control dengue virus.

**Conflict Of Interest :** NO

**Funding Of The Study :** SELF

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