

## Dengue Complicating Pregnancy – Case Series At Tertiary Care Hospital

DR. GOMPA GOWRI SANDHYA<sup>1</sup>, DR POTHUGUNTA BHANU  
TEJASWINI<sup>1</sup> DR CH SUNITHA<sup>2</sup>

*1 POST GRADUATE, 2 PROFESSOR*

*CORRESPONDING AUTHOR : DR KONERU GANGADHARA RAO PROFESSOR and HOD  
DEPARTMENT OF OBGY, NRI GENERAL AND SUPER SPECIALITY HOSPITAL, CHINAKAKANI,  
GUNTUR, ANDHRA PRADESH.*

### **Abstract:**

**INTRODUCTION** :Dengue fever is a viral disease caused by Four closely related serotypes of flavivirus,transmitting to humans by Aedes aegyptus mosquitoes Most of the states in INDIA are dengue endemic ,40% of world population live in dengue endemic prone zone .WHO estimates 100 million infections occur every year including 5 lakh Dengue hemorrhagic fever (DHF) and 22,000 deaths.It is defined as an acute febrile illness with one or more following signs or symptoms(2) intense headache, retro-orbital pain, myalgia, arthralgia, skin rash, leukopenia, and haemorrhagic manifestations, dengue in pregnancy cause more complications than with non pregnant woman

**Materials and methodology:** Prospective observational study conducted at obstetrics department of NRI General and Super speciality , Chinakakani, Guntur, Andhra Pradesh.Study was done after taking permission from institutional ethics committee and consent from patients.The data was collected in terms of of pregnant woman who admitted during seasonal outbreak of dengue betweenSeptember 2022 and November 2022.Maternal outcome and Perinatal outcome were studied.

**RESULTS:** During the months of September and October 2021, 20 pregnant women were seen in casualty emergency with complaint of fever and were admitted for evaluation. As per protocol, dengue PCR (NS1Ag) was done in all women. Out of 20, 6 were dengue positive,Incidence – 30% out of 6 3 people developed severe complications and admitted in ICU neede intensive management

**CONCLUSION:** In this study dengue was associated with high fetal mortality and maternal morbidityPregnant women with dengue fever should be considered for admission early in tertiary care hospital where ICU, NICU facilities available

**Key words:** dengue virus, dengue hemorrhagic fever,

Date of Submission: 26-02-2023

Date of Acceptance: 10-03-2023

### **I. INTRODUCTION:**

Dengue fever is a viral disease caused by Four closely related serotypes of flavivirus,transmitting to humans by Aedes aegyptus mosquitoes Most of the states in INDIA are dengue endemic ,40% of world population live in dengue endemic prone zone .WHO estimates 100 million infections occur every year including 5 lakh Dengue hemorrhagic fever (DHF) and 22,000 deaths.<sup>1</sup>It is defined as an acute febrile illness with one or more following signs or symptoms(2) intense headache, retro-orbital pain, myalgia, arthralgia, skin rash, leukopenia, and haemorrhagicmanifestationsIn general, the WHO revised dengue infection in 2009 into dengue without warning sign (D–W), with warning sign (D+W) and severe dengue fever (SDF),<sup>2</sup>Dengue in pregnancy can increase the risk of maternal haemorrhage, preterm labour, oligohydramnios, fetal deaths, and vertical transmission leading to neonatal thrombocytopenia requiring platelet transfusion (3) The clinical presentation can be confused with Hemolysis, Elevated Liver enzyme, and Low Platelet count (HELLP) syndrome; thus, serology helps in distinguishing these two conditions<sup>3</sup>

Case 1: A 26 year old primi gravida 36 weeks pog came to emergency department with of history of fever with chills since two days,lab evaluation showed dengue serology NS1 ag positive,with platelets 30,000( DHF) with decreased fetal movements managed by emergency cesarean with administration of single donor platelets been in ICU for 5 days. Later discharged on day 8 no post op complications

Case 2 : 29 year primie30 Week POG came to LR with severe fever and chills on evaluation dengue positive with deranged LFT and platelets (80,000) usg showed Intra uterine death , managed by vaginal delvery and conservatively in LR

CASE 3 : A 28 year G2P 1 (37 weeks ) came with fever history diagnosed as dengue positive (DHF) outside referred in view of non availability of ICU ,blood bank and NICU facilities managed conservatively baby was admitted in NICU needed platlets transfusion to baby and mother

Case 4 : A 35 year elderly primie gravida 32 week pog came to Labour room with fever and jaundice admitted in ICU as lab values deranged needed platelets transfusion (DHF)

Case 5 : 32 year old G2P1 36 week pog with dengue fever but no derangement in lab values managed conservatively delivered at term 39+4 week via NVD

Case 6: 24 year old multigravida 28 weeks pog diagnosed as dengue fever with mild symptoms managed conservatively

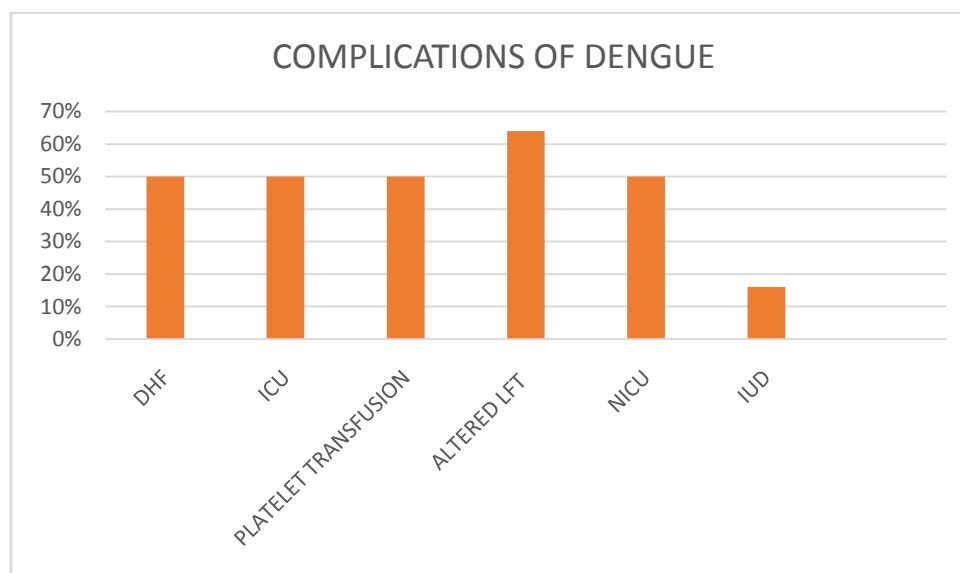
## II. Materials And Methodology:

Prospective observational study conducted at obstetrics department of NRI General and Super speciality , Chinakakani, Guntur, Andhra Pradesh.Study was done after taking permission from institutional ethics committee and consent from patients.The data was collected in terms of pregnant woman who admitted during seasonal outbreak of dengue between September 2022 and November 2022.Maternal outcome and Perinatal outcome were studied

## III. Results:

During the months of September and October 2021, 20 pregnant women were seen in casualty emergency with complaint of fever and were admitted for evaluation. As per protocol, dengue PCR (NS1Ag) was done in all women. Out of 20, 6 were dengue positive, Incidence – 30% In the current study, 3 women (50%) had dengue haemorrhagic fever (DHF). 3 women required transfusion to maintain platelet count in desired range; on average each woman required 4 platelet transfusions. Most women had low platelet counts at the time of admission (mean 81,000/mm<sup>3</sup> ); Platelet count less than 30,000/mm<sup>3</sup> was seen in 3 woman with dengue shock syndrome with increased risk of bleeding manifestation 3 woman had DHF and admitted in ICU ,3 had severe oligohydramnios and needed termination immediately one at 36 weeks pog had altered liver function and associated with severe pre eclampsia managed in ICU with platelet transfusions and emergency section was done, perinatal outcome as one woman had Intra uterine death, 3 preterm deliveries were seen , 3 were admitted in NICU as preterm

Complication	Number	Percentage
<b>DHF</b>	<b>3</b>	<b>50%</b>
<b>ICU admissions</b>	<b>3</b>	<b>50%</b>
<b>Platelet transfusions</b>	<b>3</b>	<b>50%</b>
<b>Altered liver function tests</b>	<b>4</b>	<b>64</b>
<b>NICU admissins</b>	<b>3</b>	<b>50 %</b>
<b>IUD</b>	<b>1</b>	<b>16 %</b>



#### **IV. Discussion:**

Maternal mortality in our study was not seen as cases have been managed in tertiary care hospital but mortality rate in India is 10% whereas case fatality rate in nonpregnant population is 3 to 5%.<sup>4</sup>

In another study done in India by Agrawal et al. maternal mortality rate was 12%. In our cases, some patients clinically showed severe thrombocytopenia (<50,000/ $\mu$ L) with elevated liver enzymes.

In another study, exaggerated cytokine cascade imposed a high risk for massive plasma leakage leading to the development of acute pulmonary oedema and ascites.<sup>5</sup>

Prematurity and postpartum haemorrhage are significant risks to mother and baby. Shown in a large prospective study by Rennie et al. 44 women with dengue serology positive reported fever. The median temperature at admission was 100.0 °F (range 99.9–104.2 °F). Other complaints like myalgias in 40 (90.9%) followed by arthralgias in 39 (88.6%) (Fig. 1). 22 (50%) women presented with warning signs on admission; these signs included vomiting (21/44, 47.5%), behavioural changes (4/44, 9.1%), difficulty in breathing (3/44, 6.8%), abdominal pain 3/44 (3/44, 6.8%), altered sensorium (2/44, 4.5%), seizures (1/44, 2.3%), jaundice (1/44, 2.3%) and loss of consciousness 1/44 (1/44).

Low platelets and elevated liver enzymes might be predictive factors for PPH, and transfusion would be prepared for childbirth.

Studies showed increased incidence of complications in pregnant women near term and needed intensive management, also coincide with HELLP syndrome so liver function tests and platelets should be monitored in every dengue case.

#### **ABBREVIATIONS :**

PPH postpartum hemorrhage

LR labour room

Ns antigen non structural antigen

IUI Intra uterine death

#### **V. Conclusion:**

In this study dengue was associated with high fetal mortality and maternal morbidity. Pregnant women with dengue fever should be considered for admission early in tertiary care hospital where ICU, NICU facilities are available. Pregnant women should avoid travel to dengue afflicted regions. Vector control methods should be employed during seasonal outbreaks, proper evaluation of platelets and liver function tests is mandatory with dengue positive woman, pregnancy with dengue fever is a high risk pregnancy managed accordingly by a multidisciplinary approach where intensivists, transfusion medicine, senior obstetrician, neonatologist are required.

#### **References**

- [1]. World Health Organization RO for S-EA. Comprehensive Guideline for Prevention and Control of Dengue and Dengue Haemorrhagic Fever, Revised and Expanded Edition; WHO Regional Office for South-East Asia: New Delhi, India, 2011.
- [2]. National Notifiable Diseases Surveillance System (NNDSS). Dengue Virus Infections 2015 Case Definition. CDC. Available online: <https://www.cdc.gov/nndss/conditions/dengue-virus-infections/case-definition/2015/> (accessed on 30 March 2020)
- [3]. Phupong V. Dengue fever in pregnancy: a case report. *BMC Pregnancy Childbirth*. 2001;1:7
- [4]. WHO Dengue: Guidelines for Diagnostics, Treatment, Prevention and Control, World Health Organization, Geneva, Switzerland, 2009
- [5]. Sellahewa, K.H. Pathogenesis of Dengue Haemorrhagic Fever and Its Impact on Case Management. *ISRN Infect. Dis.* 2013, 2013, 1–6

DR KONERU GANGADHARA RAO, et. al. "Dengue Complicating Pregnancy – Case Series at Tertiary Care Hospital." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 22(3), 2023, pp. 36-38.