



A CASE OF DENGUE FEVER IN PREGNANCY WITH MATERNAL MORTALITY

Obstetrics & Gynaecology

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ABSTRACT

Dengue is a vector borne viral infection which is a major health problem. Symptoms varies from febrile illness to Dengue shock syndrome. Dengue infection in pregnancy carries the risk of hemorrhage for both the mother and newborn.

Dengue infection in a pregnancy is associated with increased maternal and perinatal morbidity as well as mortality. Early diagnosis and prompt management with analgesics, adequate fluid replacement and maintenance of electrolyte balance is needed to prevent complications. A high index of clinical suspicion is needed in any pregnant women with fever.

KEYWORDS

Dengue fever, Dengue shock syndrome, Pregnancy maternal mortality.

INTRODUCTION

Dengue fever is mosquito borne febrile illness transmitted through Aedes aegypti.

Dengue virus belongs to family Flaviviridae. Dengue virus has four serotypes mainly DENV-1, DENV-2, DENV-3, DENV-4. The world Health organization (WHO) previously classified Dengue into three disease categories – Dengue fever (DF), Dengue hemorrhagic fever (DHF), Dengue shock syndrome (DSS). Infection by one serotype produces lifelong immunity to that specific serotype but only a few months of immunity to the others (2,3). Dengue infection in pregnant women carries the higher risk of hemorrhage for both the mother and the newborn. There is risk of premature birth and fetal death and vertical transmission causing neonatal thrombocytopenia, requiring platelet transfusion have been reported (4-8).

Diagnosis of Dengue infection affects obstetric management particularly mode of delivery due to the potential risk of hemorrhage secondary to thrombocytopenia.

Positive serology or viral studies confirm Dengue infection (9). Early diagnosis and prompt management plays an important role.

CASE REPORT

35 yrs. G₂P₁L₁ with 9 months of Amenorrhea, unregistered patient, not had antenatal checkups without any ANC documents came to D. Y. Patil hospital, Kolhapur in active labor with history of fever since 2 days prior to admission.

O/E
PR – 106 bpm;
BP – 150/90 mmHg
UP + 1
Pedal Edema - Absent
Temp - 98° F

Patient progressed spontaneously and delivered vaginally one hour after admission.

Delivery was uneventful. No PPH

On Admission:

Hb: 10.4 gm%
TLC: 16700
Platelets: 82,000

Dengue NS 1 and IgM positive.

Post-delivery, patient BP remained continuously high > 160 / 90 mmHg

6 hours after delivery: patient went into sudden hypotension with BP – 70/40 mm of Hg
PR – 140 bpm; feeble Temp - 102° F
RBS found low
SPO₂ – 88% @ R.A

Cold clammy extremities
CBC was sent: Hb: 11.8 gm%
TLC: 23,200
Platelet: 47,000

Fluid resuscitation started, patient was started on Norad and O₂ support. Fluids continued @ 150ml/hr and higher antibiotics started. Patient shifted to ICU for further management.

Chest X-ray revealed – pleural effusion
Bedside USG – Moderate Ascites⁺
Mild Hepatomegaly⁺

24 hours after delivery – patient went into multiorgan dysfunction syndrome and DIC. 8 FFP'S given. But patient succumbed to death 36 hours after delivery.

DISCUSSION

Dengue is an important differential diagnosis for any febrile illness in pregnancy, especially in endemic areas and during outbreaks. It is estimated that every year 100 million infections occur worldwide of whom 250-500 thousand manifest severe disease. Others being mild or even asymptomatic. (10-12)

The WHO revised the Dengue classification in the year 2009 (13). As per the revised WHO classification the dengue cases are now classified as either Dengue with or without warning signs or severe Dengue.

Dengue without warning signs is defined as acute febrile illness with atleast two of the following: Nausea / vomiting, myalgia, rash, leucopenia and a positive tourniquet test. Dengue with warning signs is defined as abdominal pain, persistent vomiting, fluid accumulation, mucosal bleeding, lethargy, liver enlargement and increasing hematocrit with reducing platelets and atleast one must be observed to fulfill the diagnosis of Dengue with warning signs.

Severe Dengue is associated with severe plasma leakage, severe bleeding and organ failure.

According to WHO, the following criteria for diagnosis of Dengue hemorrhagic fever should be fulfilled. Fever, hemorrhage tendency, thrombocytopenia and evidence of plasma leak as evidenced by hematocrit 20% higher than expected or a drop in hematocrit of 20% or more than baseline following IV fluid therapy, pleural effusion or Ascites.

Dengue shock syndrome is characterized by Dengue hemorrhagic fever along with a weak rapid pulse and a narrow pulse pressure or hypertension and cold clammy skin and restlessness (13). Elevated liver enzymes are common phenomenon and values are higher in DHF than DF. Although liver is not a primary target of Dengue, hepatic involvement has been detected ranging from elevated transaminase levels to Acute Fulminant Hepatitis leading to Hepatic failure(14).

Dengue fever in a pregnancy is associated with intrapartum and postpartum hemorrhage, preeclampsia, miscarriages, fetal anomalies, premature birth, low birth weights (15). Severe Dengue has been associated with maternal mortality with fatality rates ranging from 2.9% - 22% (16).

Vertical transmission of Dengue has reported. Especially when mother is infected at or near term (17).

We report a maternal mortality who developed Dengue shock syndrome 6 hours after delivery. We managed patient with extensive fluid resuscitation, Noradrenaline support, O₂ support and Antipyretics. But patient deteriorated very fast and went into multiorgan dysfunction syndrome and DIC and succumbed to death 36 hours after delivery.

CONCLUSION

Dengue in pregnancy requires early diagnosis and prompt treatment to prevent complications. Dengue infections during pregnancy increases the chance of dengue hemorrhagic fever, Dengue shock syndrome leading to maternal mortality. So careful monitoring of warning signs and symptoms is essential. Presence of thrombocytopenia elevated liver enzymes in case of preeclampsia and eclampsia can be confused with HELLP syndrome. It is also associated with preeclampsia which further deteriorates the condition. Awareness programmes on vector control and sound knowledge in diagnosing. Dengue fever in pregnancy and prompt management is important for reducing maternal mortality and mortality.

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