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Successful Pregnancy Outcome in a Case of Dengue with Eclampsia

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Abstract
Malaria and dengue are one of the commonest vector borne diseases seen in India. While management of uncomplicated dengue is usually symptomatic severe disease like dengue shock syndrome and dengue hemorrhagic fever may require tertiary medical care. Pregnancy complicated by dengue hemorrhagic fever is not usually seen in obstetric practice but with increase in cases of dengue in child bearing age group this incidence is expected to rise. Proper and in-time management of such cases are important as delay in treatment may adversely affect fetal and maternal well-being. Pregnancy complicated by dengue is also dangerous because it increases the risk of premature delivery, adverse neonatal outcome and post-partum hemorrhage. We here report a case of 3rd gravida female with bad obstetric history who presented to us at 32 weeks of gestation with dengue hemorrhagic fever. This report emphasizes the complications of dengue infection in pregnancy. Early diagnosis, proper referral and immediate treatment are the key factors in the management of pregnancy complicated by dengue fever.
Key word: *Pregnancy, Dengue, Thrombocytopenia, Post-partum hemorrhage.*

Introduction

Dengue fever is a febrile illness caused by dengue virus which is a flavivirus belonging to family flaviviridea. There are four serotypes of dengue viruses responsible for clinically significant dengue fever. They are DENV-1, DENV-2, DENV-3, and DENV-4. The spectrum of illness is wide and may differ from a mild fever with myalgia to severe hemorrhage and shock. The diagnosis of dengue depends upon positive serology which can be confirmed by viral PCR studies. Combination of NS1 Ag Strip and IgM ELISA is reported to be a suitable combination tests for timely and accurate dengue diagnosis on single serum specimen [1]. Pregnancy complicated by dengue poses a risk for mother as well as the fetus. There is an increased risk of antepartum hemorrhage, postpartum hemorrhage and adverse fetal outcome. There are some case reports where neonatal thrombocytopenia was reported secondary to vertical transmission of dengue from mother to fetus [2]. Management of pregnancy complicated by dengue requires proper obstetric care. The risk of hemorrhage during delivery

poses obstetric dilemma for treating obstetrician [3]. The pregnancy complicated by dengue and PIH is also difficult to manage because it's difficult to differentiate hemolysis , elevated liver enzymes, and low platelet counts (HELLP) syndrome caused by PIH and similar blood picture caused by dengue [4]. Proper management of such patients may prevent maternal mortality as well as adverse fetal outcome [5]. We here report a case of patient who presented to us with pregnancy complicated by dengue hemorrhagic fever. She was successfully managed and there was no adverse maternal or neonatal outcome.

Case Report

A 30 year G3P2A1L1 female was referred to us at 32 weeks of gestation with a history of high grade fever with chills. The investigations done at the referring hospital showed severe thrombocytopenia and NS1 positive for dengue. The history revealed that she was registered and immunized at a private hospital. She had regular antenatal visits during present pregnancy. She had a history of fever with chills along with severe headache 8 days back. For these complaints she was admitted in the same hospital. At the time of initial admission her investigations were done. Her CBC was done Hb was 9 gm TLC was 11500, platelet count 98,000/cumm. NSI was done which was positive. A diagnosis of dengue was made and symptomatic treatment was started. IV antibiotics and IV fluids were given along with presumptive antimalarial. On D4 a repeat CBC showed Thrombocytopenia (Platelet count 34,000/-). On examination there was appearance of petechial rash over both legs. Also there was ecchymotic patches over venipuncture sites. There was also systemic hypertension (Blood pressure 150/110 mm of hg). Also patient started complaining about severe headache and blurring of vision. Blood transfusion was initially given and In view of increased severity of illness along with thrombocytopenia and blurring of vision the patient was referred to nearby district hospital from where she was referred to us.

At the time of admission to our hospital obstetric history was reviewed. Patient was gravida 3. 1st issue was male child delivered by LSCS. The indication for LSCS was Pregnancy induced hypertension. Baby was delivered prematurely at 32 weeks. Immediately after delivery the baby developed respiratory difficulty and hence was admitted in NICU. Baby died on D7 of life. The cause of death was told to be prematurity with respiratory distress. There was also a history of first trimester abortion at 10 weeks of gestation during subsequent pregnancy. Gravida 3 was present pregnancy. At the time of admission patient's general condition was poor. Patient was febrile with presence of pedal edema and ecchymosis and petechial rashes involving hands, legs, abdomen and chest. Pulse was 98/min, regular but low volume. Blood pressure was 150/100 mm of hg. On palpation height of uterus was corresponding to 30 weeks of gestation with cephalic presentation. FHS was recorded at 140/min. There was presence of LSCS scar but there was no scar tenderness. Patient was irritable and was complaining of severe headache and blurring of vision. In view of NS1 positive with petechial and purpura, feeble pulse and complaints of blurred vision patient was shifted to Intensive care unit. Investigations done at the time of admission revealed Hb-10 gms, Platelets 8000/cumm, TLC 15900/cumm, Sr Mg- 3.6, Blood urea-50, Sr creatinine- 1.1, Total Billirubin-1.2, SGOT 70 U/dl, SGPT 86 U/dl, PT- 14 seconds, APTT-29 seconds and INR was 1.09.

Immediately after admission the patient was started on IV fluids and IV antibiotics. Simultaneously PCV, Fresh frozen plasma and platelet transfusions were started. An obstetrics ultrasound was done which showed single live intrauterine gestation with cephalic presentation. Placenta was located posteriorly mean gestational age was determined to be 34 weeks and amniotic fluid was adequate. Effective fetal weight was 1840 gms. Fetal Doppler was done which revealedfetoplacental and urteroplacental insufficiency. On day 1 of admission itself (after 8

hours of admission) patient went into spontaneous preterm labour and delivered a male baby weighing 1.7 kg. After delivery baby developed respiratory distress. Baby was examined by pediatrician and was admission in NICU in view of hyaline membrane disease

Four to five hours after delivery patient developed atonic post-partumhemorrhage. There was profuse vaginal bleeding. A local examination revealed vulvovaginalhematoma.Patient was given IV bolus and shifted immediately to operation theatre. Uterotonics were started and given till uterus was well contracted. Vulvovaginal hematoma was evacuated, episiotomy resuturing and vaginal packagingwas done. Her hemoglobin turned out to be 6.5 gms and platelets were 75,000/cmm. Again the patient was transfused with packed cell red blood cells, platelets and fresh frozen plasma. Again the patient was shifted to intensive care unit.The vital parameters of the patient along with urine output and abdominal girth was monitored. On subsequent day patient developed hemorrhagic shock due to postpartum hemorrhage secondary to coagulopathy. Patient was immediately intubated and connected to mechanical ventilationand ionotropeswere started. Uterine exploration was done and blood clots were removed from uterus and vagina.After removal of clots uterine tamponade with shivkar's pack (condom catheter)was given.Repeat investigations showed Hb- 4.5 gms,platelet – 1.1 lakhs/cmm. Again the patient was transfused with PCV, Platelets and fresh frozen plasma.On day 3 of delivery patient was hemodynamically stable and hence was weaned offventilator and inotrope. Later patient was put on CPAP and eventually was extubated on 4th day.A fundus examination was done which was normal. Next day condom catheter (uterine tamponade) was removed. There was no e/o any bleeding per vaginum. Repeat investigations showed Hemoglobin- 9.3 gms. Platelet- 1.8 lakhs/cmm. Since the Patient was vitally stable she was shifted back to post natal ward. Later baby was discharged from NICU after successful surfactant therapy. Later Patient had two episodes of fever with chills. Blood culture was done which showed growth of klebseilla pneumonia sensitive to amoxicillin – clavulanic acid. Appropriate Antibiotics were immediately started. Patient's blood pressure was kept under control by antihypertensives. Her Kidney and liver function test were normal. Bilateral lower limb Doppler was also done which was normal. In view of no new complaints mother was shifted to step down nursery and eventually was discharged after establishment of breast feeding.

Discussion

In countries like that of India where dengue is endemic it is important to include dengue in differential diagnosis of all patients presenting with fever and bodyache. There are studies suggesting that the incidence of dengue is increasing amongst adults [6]. As the incidence of dengue is rising in child bearing age group it is essential that all pregnant females should be investigated for dengue if they present with fever, body ache and chills. There are many case reports describing dengue fever in pregnancy and its outcome. The common presenting complaints of dengue during pregnancy are fever, chills, arthralgia, headache and myalgia [7]. The diagnosis and assessment of severity of the dengue fever in pregnancy is complicated by many facts including physiological reduction of hematocrit during pregnancy, overlapping features of HELLP and dengue hemorrhagic fever and bleeding manifestations of dengue and post-partum hemorrhage. A high index of suspicion is therefore necessary to diagnose dengue in pregnant females. A detailed history combined with serological tests may be helpful in diagnosis. Other features may include thrombocytopenia, rise in hematocrit, mildly elevated liver enzymes and atypical lymphocytosis [8]. Serological diagnosis of dengue depends upon presence of dengue IgM. NS1 antigen may diagnose dengue fever at an early stage [9]. Dengue during pregnancy may affect mother as well as the fetus. As already mentioned dengue may cause fetal

thrombocytopenia due to vertical transmission. Also there is a risk of need to conduct premature delivery in cases of severe dengue. This preterm deliveries may be responsible for respiratory distress, birth asphyxia, neonatal hypoglycemia and various other neonatal morbidities [10]. The management of pregnancies complicated with dengue is critical and like in this case may requires blood and platelet transfusions. In severe cases ventillatory support may be needed. Babies born in these patient may have severe morbidity in the form of prematurity, low birth weight, respiratory distress and bleeding manifestation. In complicated cases unless proper intensive care is provided mother and newborn are at a great risk of morbidity and mortality.

Conclusion

With increase in cases of dengue the incidence of dengue in pregnancy is expected to rise.Dengue should be suspected in all pregnant women presenting with fever, chills and myalgia. Usually symptomatic treatment is all that is required. But complicated cases, like this case, may require intensive care. Early diagnosis and appropriate treatment is key to proper management of such cases.

Conflict of interest: None

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