

Dilemma of Dengue Fever in Pregnancy a Clinical Management Experience at a tertiary care hospital

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ABSTRACT

Objective: To present clinical features, management and maternal outcome of pregnant women with dengue fever.

Study design: A descriptive observation study.

Setting: Obstetrics & Gynaecology Department of Sir Ganga Ram Hospital, Lahore and Chaudry Rehmat Ali Trust Hospital.

Duration of study: September 2011-November 2011.

Material & methods: Demographic characteristics of patients were recorded. Complete blood count, specifically platelet count, liver function tests were done serological evaluation was done for dengue IGM. Paracetamol and parenteral fluids were prescribed. All pregnant patients who were seropositive for dengue virus, presenting at any gestational age through OPD and emergency of Obs & Gynae Department, Sir Ganga Ram Hospital, Lahore. All seronegative pregnant women were excluded.

Results: The study included 18 pregnant patients presenting at different gestational ages between 34-41 wks of gestation. There patients presented with symptoms of 3-10 days duration. The average duration of symptoms at presentation was 6 days. Fever was predominant symptom (88.8%) as were myalgias (83.3%) and nausea (94.4%).

Conclusion: Where the dengue fever is highly suspected in cases of febrile pregnant women, thorough investigations should be carried out to confirm infection and prevent further maternal and fetal complications.

Key words: Dengue fever, pregnancy,

INTRODUCTION

Dengue Fever is a widespread mosquito born infection in human beings which in recent years has become a major public health concern. Infections are caused by any of four virus serotypes DEN-1, DEN-2, DEN-3 and DEN-4). The clinical features vary from a mild febrile syndrome to classical incapacitating decrease with abrupt onset, high fever, severe headache arthralgia, myalgia, rash, nausea and vomiting^{1,2}.

Dengue hemorrhagic fever is a severe and often fatal complication of dengue in which overall vascular system is damaged. Vascular instability and decreased vascular integrity and platelet dysfunction ultimately result in bleeding from different sites³.

The incidence of dengue is increasing in most tropical areas throughout the world. The world health Organization (WHO) declares dengue and dengue hemorrhagic fever to be endemic in South Asia⁴. WHO currently estimates there may be 50 million dengue infections worldwide every year⁵.

Pakistan is at high risk of being hit by large epidemics because of many over crowded cities,

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unsafe drinking water, inadequate sanitation and periurban slums around big cities. These conditions promote the spread of infectious diseases and consequently every year a large number of epidemics/outbreaks occur in different parts of the country, which result in increased morbidity and mortality. In Pakistan first outbreak of dengue was reported in 1994 with serotype DENV-2⁶. Another epidemic occurring during 2005-06 Karachi affecting masses^{7,8}. In 2011, Lahore faced the biggest ever dengue epidemic in the world⁹.

Dengue infection in pregnancy may result in maternal mortality, particularly in preterm deliveries with premature babies. Where dengue fever is endemic, the dengue infection should be highly suspected in cases of febrile pregnant women, and a thorough investigation should be conducted so as to confirm the infection and prevent further maternal and fetal complications.

METHODOLOGY

Pregnant mothers admitted through outpatient or emergency department with complaints of fever, vomiting or bleeding manifestations were included in the study.

Demographic characteristics of patients were recorded. Complete blood count, specifically platelet count, liver function tests were done serological evaluation was done for dengue IGM. Paracetamol and parenteral fluids were prescribed. Platelet transfusions were given to those with bleeding or to those with platelet count below 50,000/mm³. Patients were delivered either vaginally or by caesarean section and were discharged when symptoms settled and platelet count was above 50,000/mm³.

RESULTS

The study included 18 pregnant patients presenting at different gestational ages between 34-41 wks of gestation. There patients presented with symptoms of 3-10 days duration. The average duration of symptoms at presentation was 6 days. Fever was predominant symptom (88.8%) as were myalgias (83.3%) and nausea (94.4%). Among bleeding manifestations, PPH was predominant (50%). Other symptoms are listed in table 1. Hemoglobin levels ranged between 7-10 gms/dl in 33.3% of patients. Platelet count of less than 50,000/mm³ was encountered in 55.5% of patients. The sera of patients were analyzed for dengue IGM antibodies. 89% of patients were transfused platelet. Symptomatic treatment with intravenous fluids and anti-emetics was done leading to general improvement of condition. Out of 18 patients, 8 patients ended up in preterm delivery and rest delivered at term. 4(22.2%) were delivered vaginally and 14(77.7%) were delivered by caesarean section, out of which 2 ended up in obstetrical hysterectomy 1 patient expired on 7th day of admission, following hysterectomy as a result of incorrigible bleed from operation site and epistaxis. All term and preterm babies were alive and healthy.

Table 1: Clinical characteristics of patients (n=18)

Clinical Features	=n	%age
Fever	16	88.8
Myalgia	15	83.3
Nausea/anorexia	17	94.4
Abdominal pain	8	44.4
Rash	3	16.6
Bleeding manifestations	10	55.5
APH	3	30
PPH	5	50
Epistaxis	1	10
Bleeding from gums	1	10

Table 2: Hemoglobin and biochemical parameters among the patients (n=18)

Parameters	=n	%age
HB% (gm/dl)		
>10.	12	66.6
7-10	6	33.3
<7	-	-
Leukocyte count (10 ³ /L)		
>8.0	12	66.6
8-2	6	33.3
<2.0	-	-
Platelet count (10 ³ /L)		
>100	2	11.1
50-100	6	33.3
<50	10	55.5
ALT (μ/L)		
>40	-	-
40 or <40	18	100
AST		
>40	2	11.1
40 or <40	16	88.8

Fig. Gestational age at presentation (n=18)

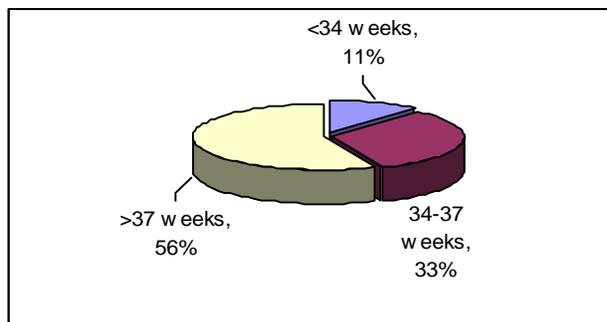


Table 3: Gestational age at presentation (n=18)

Gestational age	=n	%age
< 34 wks	2	11.1
34-37wks	6	33.3
>37wks	10	55.5

Table 4: Transfusions given to patients

Transfusions	=n	%age
Whole blood	16	88.8
Platelets	12	66.6
FFPS	2	11

Table 5: Pregnancy Outcome (n=18)

Outcome	=n	%age
SVD	4	22.2
LSCS	14	77.7
Hysterectomy	2	11
Maternal death	1	5

Table 5: Pregnancy outcome

Mode of delivery	Gestational age		Fetal outcome
	Preterm	Term	
SVD	1	1	Alive healthy
L.S.C.S			
Previa	2	2	Alive healthy
Previous 3	1	2	Alive healthy
Previous. 2	1	2	Alive healthy
Previous. 1	0	2	Alive healthy
Failure to progress	0	2	Alive healthy
Obstetrical hysterectomy	1	1	Alive healthy
Maternal health	0	0	Alive healthy

DISCUSSION

Dengue infection has emerged as public health problem in our country initially reported in Karachi many individual outbreaks have been reported in small studies from all over the country¹⁰. The major causative factors include uncontrolled urbanization, population growth and large numbers of human travel¹¹.

The study showed fever, myalgia and anorexia as the dominant symptom's of dengue fever as were also observed in another study¹². Bleeding tendency was observed in 55.5% of cases as compared to 2% in the same study, the difference might be due to pregnant state, previous sub clinical infection, anemia, which was observed in about 33.3% of pregnant patient. PPH was predominant bleeding manifestation effecting about 50% of cases thrombocytopenia was observed abnormally among 88.8% of patients and proved fetal in one patient who developed intraabdominal and pulmonary bleed following obstetrical hysterectomy. Detection of virus by PCR is gold standard test for diagnosis of dengue virus infection¹³ but serological testing also compared to PCP¹⁴.

The prevention of dengue resides in controlling *Aedes Aegypti* mosquito, a vector for the virus. This can be achieved by illuminating its habitats, use of insecticides and an application of insect repellent and using mosquito nets.

CONCLUSION

Dengue fever is an acute, mosquito-transmitted viral disease that ranges from benign self limiting illness to life threatening complication like Dengue Hemorrhagic Fever. Dengue Fever in pregnancy is associated with increased maternal morbidity and

mortality. Where dengue fever is an endemic dengue fever should be highly suspected in cases of febrile pregnant women and thorough investigations should be carried out to confirm infection and prevent further maternal and fetal complications. Treatment is mainly supportive using intravenous fluids, antiemetics, antipyretics, blood and platelet transfusion.

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