

# Screening of Reproductive Health Problems in Flood Affected Pregnant Women

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## ABSTRACT

**OBJECTIVE:** To analyze various hazardous obstetrical problems and pregnancy outcome in flood affected pregnant women.

**STUDY DESIGN:** Descriptive case series.

**PLACE:** Flood affected camps at District Jamshoro, Dadu, and Hyderabad Sindh.

**METHODOLOGY:** This study was conducted at flood relief camps at District Jamshoro, Dadu and Hyderabad from August 2010 to November 2010. During this study period all the pregnant women with various obstetrical problems were included while the pregnant women with other medical problems having no direct or indirect effect on pregnancy like gastroenteritis, skin problems were excluded from the study. These women were registered on pre-designed pro-forma. Data were collected and analyzed on SPSS version 16.

**RESULT:** Total 571 (15.01%) women were having different obstetrical problems during the study period. Majority of these women 313 (54.81%) were in between 21-30 years of age group and were in last trimester of pregnancy 359 (62.87%). Commonest obstetrical problems seen in flood affected women were anaemia in 399 (69.87%) cases. Their hemoglobin percentage was below 9 gram, abruptio placentae in 79 (13.83%) cases, premature rupture of membranes in 69 (12.08%). Maternal morbidity seen was due to obstetrical trauma in 157 (27.49%) cases, post partum haemorrhage in 143 (25.04%) cases. Fetal problems seen were low birth weight in 237 (41.50%) cases, still birth in 67 (11.73%) cases.

**CONCLUSION:** Pregnant women were severely affected by the flood having major impact on their health, life and their off spring.

## INTRODUCTION

Approximately 500,000 pregnant women were affected by the 2010 flood in Pakistan and about 1.5 million women of reproductive age were in a strong need of emergency obstetric care as reported by the news listing.<sup>1</sup> Reassurance and provisions of maximum devoted services will heal their wounds a little as forcible displacement increases psychological, social and physical load on pregnant women<sup>2-5</sup>.

Leslie Pitterson reported that Pakistan experienced worst flood and most sufferers were 100,000 pregnant women who were expected to deliver with in the month and they will not receive required medical care.<sup>6</sup>

The flood had made miserable maternal health in the country that is already having highest mortality rates in the world. The UN estimated that in Pakistan 320 women die for every 100,000 live births and there is a strong fear that current flood had ruined maternal health. Most of the populations of the flood affected areas were displaced and about 70% of these were women<sup>8</sup> among which approximately 500,000 were pregnant and these were the more vulnerable population who are already facing the problems like lack of

access to the antenatal care,<sup>6</sup> assisted delivery and emergency obstetric care provisions. These women suffered a lot with the disastrous situations. Nath L. study<sup>9</sup> shows that in Tsunami disaster women were at a greater risk of death in proportion to men. The common risk factors for high maternal mortality in our populations are anaemia, malnutrition, lack or improper antenatal care, unhygienic conditions, limited access as well as improper utilization of family planning methods and deliveries by unskilled health professionals. Considering the protective reproductive measures during 1995 minimum initial service package (MISP)<sup>10</sup> emerged for emergency situation, which are coordinated sets of activities designed for the prevention and management at the onset of crisis situations like prevention of maternal and neonatal mortality and morbidity, and planning for comprehensive reproductive services at earliest in any emergency situations. Emergency reproductive health kits are an integral part of MISP implementation. These kits were designed according to the women's need in disaster situation, UN and other agencies also collaborated. These kits facilitate the clean and safe deliveries, suture of tears, vaginal examinations, vacuum extraction

delivery, referred level kits and blood transfusion kits. We are also in strong need for preparation and provision of such kits during disastrous situations.

The rationale of the study is to analyze the various obstetrical problems which had increased the maternal and fetal mortality and morbidity in this disaster.

#### METHODOLOGY

This study was conducted at 10 flood relief camps at District Dadu, Jamshoro and Hyderabad Sindh and related referral hospitals from August 2010 to October 2010. These camps were visited fortnightly for three months. All the pregnant women with various obstetrical problems during antenatal period, during labour and in post natal period were included in the study, while the pregnant women with other medical problems having no direct or indirect effect on pregnancy like gastroenteritis, skin problems were excluded from the study. These women were registered on predesigned proforma with variables like demographic characteristics, age, parity, gestational period, symptomatology, mode of delivery, place of delivery, and complication during delivery, post natal period, maternal and fetal out come. The data were collected and analyzed on SPSS version 16. The variables were measured in terms of frequency, percentages, and mean with standard deviation.

#### RESULT

Majority 313 (54.81%) of pregnant women were between 21 and 30 years of age and among them 352 (61.64%) were grand multiparous (Para 4 and above). Most 359 (62.87%) of these women were in their third trimester of pregnancy. Common mode of delivery was spontaneous vaginal in 423 (74.08%) women and was conducted in different places like flood relief camps 96 (16.81%), and at local hospitals 225 (39.40%), only 207 (36.25%) women were referred to tertiary care hospital (**Table I**). Frequent problems seen in pregnant women were anaemia in 399 (69.87%) cases, these women were having hemoglobin level less than 9 gram percent, threatened abortion in 27 (4.72%) cases and abruptio placentae in 79 (13.83%) cases (**Table II**). Complications seen in mothers were obstetrical trauma in 157 (27.49%) cases, Post partum haemorrhage in 143 (25.04%) cases, puerperal sepsis in 86 (15.06%) cases and 53 (9.28%) mothers died. Fetal complications seen were very low birth weights in 84(14.71%) and 153 (26.79%) cases, still birth was seen in 67 (11.73%) cases, intrauterine death in 78 (13.66%) cases and

early neonatal death in 120(21.01%) cases (**Table III**).

**TABLE I:**  
**DEMOGRAPHIC CHARACTERISTICS (n=571)**

| Demographic Characteristics      | No. of cases | Percentage |
|----------------------------------|--------------|------------|
| <b>Age</b>                       |              |            |
| a: > 20 years                    | 79           | 13.83      |
| b: 21-30 years                   | 313          | 54.81      |
| c: 31 and above                  | 179          | 31.34      |
| <b>Parity</b>                    |              |            |
| a: primi parous                  | 56           | 9.80       |
| b. Para: 1-3                     | 163          | 28.54      |
| c: Para 4 and above              | 352          | 61.64      |
| <b>Gestational Period</b>        |              |            |
| a: up to 20 weeks                | 43           | 7.53       |
| b: 21-30 weeks                   | 169          | 29.59      |
| c: 31-40 weeks                   | 359          | 62.87      |
| <b>Mode of delivery</b>          |              |            |
| a. Spontaneous vaginal           | 423          | 74.08      |
| b. Assisted vaginal              | 31           | 5.42       |
| c. Abdominal                     | 74           | 12.95      |
| <b>Place of delivery</b>         |              |            |
| a. Flood Relief Camp             | 96           | 16.81      |
| b. Local hospital                | 225          | 39.40      |
| c. Referred to tertiary hospital | 207          | 36.25      |

**TABLE II: OBSTETRICAL PROBLEMS IN FLOOD AFFECTED FEMALES (n=571)**

| Obstetrical Problems                   | No. of cases | Percentage |
|--|--------------|------------|
| Anaemia                                | 399          | 69.87      |
| Abruptio Placentae                     | 79           | 13.83      |
| Threatened abortion                    | 27           | 4.72       |
| Preterm premature rupture of membranes | 69           | 12.08      |
| Obstructed Labour                      | 53           | 9.28       |

**TABLE III: OUTCOME OF PREGNANCY (n=571)**

| Out come                   | No. of cases | Percentage |
|----------------------------|--------------|------------|
| <b>Maternal</b>            |              |            |
| a. Normal                  | 142          | 24.86      |
| b. Obstetrical Trauma      | 157          | 27.49      |
| c. Post partum haemorrhage | 143          | 25.04      |
| d. Puerperal sepsis        | 86           | 15.06      |
| e. Death                   | 53           | 09.28      |
| <b>Fetal out come:</b>     |              |            |
| I. Abortion                | 17           | 2.97       |
| II. Alive with             |              |            |
| <b>A: Apgar Score:</b>     |              |            |
| a. Normal                  | 296          | 51.83      |
| b. Low                     | 232          | 40.63      |
| <b>B: Fetal weight</b>     |              |            |
| a. 1-1.5 kg                | 84           | 14.71      |
| b. 1.6 – 2.5 kg            | 153          | 26.79      |
| c. 2.6-3.5 kg              | 291          | 50.96      |
| <b>C. Fetal viability</b>  |              |            |
| a: alive at birth          | 383          | 67.07      |
| b: still birth             | 67           | 11.73      |
| c: Intrauterine death      | 78           | 13.66      |
| d: Early neonatal death    | 120          | 21.01      |

## DISCUSSION

Floods are common natural disasters having major impact on the life of the human being. Women's are most vulnerable and especially the pregnant women and their offspring's, these both are already at great risk of their health and life in developing countries like ours, same is reported by Meleis Al study.<sup>11</sup>

In this study the major group affected was between 21-30 years 313 (54.81%) and 352(61.64%) were the grand multiparous women this could be due to lack of utilization of contraceptive services and poor literacy rate while the pregnant women under 20 years of age were less 79 (13.83%) , this is consistent with Hamilton BE et al study.<sup>12</sup>

In this study 359 (62.87%) women were in their last trimester of pregnancy comparing with other studies<sup>10,13-14</sup> from Tsunami affected countries liked Indonesia, Thailand, Srilanka, India and Maldives. Out of 1500,000 pregnant women at the time of disaster, 50,000 (33.33%) women were in third trimester of pregnancy, while in the India alone out of 8300 pregnant women affected in Tsunami region among which 1380 (16.62%) women were in last three months of pregnancy.<sup>8</sup> This could be due to the fact that women tend to seek health care in third trimester more than early pregnancy. The women having early pregnancy

were not concerned about their health issue, instead they were much worried about the problem of disaster. In this study 223(39.05%) women were referred to tertiary care hospitals due to various obstetrical complications like prolonged labour or obstructed labour, abruptio placentae, severe anaemia in pregnancy due to the poor quality or no antenatal care in disastrous situations and unattended labour, as also reported by Zofeen study<sup>8</sup>. In this study maternal (9.28%) and perinatal (21.01%) mortality rate was high. This could be due to poverty, malnutrition, neglected labour, late referral to health facilities, poor general maternal health, increased burden on health facility centers having less equipment, lack of trained staff and blood transfusion facilities in emergency situations. Same is reported by other studies<sup>15-18</sup> that in countries where neonatal health and maternal health was a great challenge before Tsunami disaster these both populations suffered a lot with major impact on their health and life with this natural disaster.

## CONCLUSION

Flood had endangered the health and life of the pregnant women and their offsprings. The maternal and fetal mortality rate was quite high. The maternal mortality rate found was three times more than general maternal mortality rate of our country. The different risk factors were avoidable with proper health planning.

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