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## Pre-eclampsia among pregnant women attending antenatal care in Murtala Muhammed Specialist Hospital, Kano State of Nigeria

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**ABSTRACT:** Pre-eclampsia was studied among pregnant women attending antenatal care in Murtala Muhammad Specialist Hospital, Kano State of Nigeria. Questionnaire was administered to the women under study (255). Mercury sphygmomanometer was used for blood pressure measurement. Dip stick method was used to detect protein in urine. Edema was visibly observed in various part of the body during antenatal visit. Pre-eclampsia has been established in this study, and was found to be higher in primigravidae than in multigravidae. Proteinuria and edema was the major clinical features in primigravidae whilst high blood pressure and edema predominate in multigravidae. Headache and epigastric pain were the commonest symptom of pre-eclampsia in both primigravidae and multigravidae. Most of the pre-eclamptic patient do not have primary school leaving certificate as far western education. There is need for community health education to increased awareness of pregnant women to avail themselves of antenatal care as well as reduction of poverty and improvement of socio-economic conditions of the citizen

**Keywords:** pre-eclampsia, Primigravidae, Multigravidae. Murtala Muhammed Hospital.

## Introduction

Pre-eclampsia is a disease unique to pregnancy characterized by clinical triad., maternal hypertension, proteinuria and oedema induced by pregnancy after 20<sup>th</sup> week gestation (Moodley *et al.*, 1995). Although professional knowledge of pre-eclampsia remains limited (Walker, 1995), the general consensus seem to be that the problem originate in the placenta (Broughton-pipkin, 1995., Campbell, 1996., Redman, 1994., Umar and peddie, 1997). Impaired trophoblastic invasion result in the spiral arteries failure to dilate as required, this in turn cause the arteries to fail to respond to the massive increase in utero- placental perfusion required in later pregnancy, leading to placental ischemia, growth retarded fetus and some time intra uterine death (Redman, 1992., Broughton-pipkin 1995). It was estimated that 99% of pre-eclamptic cases are in the developing world (Lucy., 2004). United state (U.S) records approximately 5% pregnancies complicated by pre-eclampsia (Brown, 2003). Statistic however shows that between 1.5-8 million women developed pre-eclampsia each year world wide and approximately 150,000 women have eclamptic convulsion, with a conservative estimate of between 40-60,000 mortality (Lucy, 2004).

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According to World health organization data base, 10% of all maternal death in hospital are associated with eclampsia (Duley, 1992). It seems maternal conditions on admission and associated complications are the major determinant of the maternal outcome. Pre-eclampsia and eclampsia is therefore one of the most important causes of mortality to mother and children (Zahra, and Irandokhtmeihri, 2004). The present study was under taken in Murtala Mohammed Specialist Hospital Kano State of Nigeria, with the view of screening women during antenatal care for the presence of the clinical features of pre-eclampsia and the pre-eclampsia.

## **Materials and Methods**

The study was conducted in the maternity unit of Murtala Muhammad Specialist Hospital in Kano State of Nigeria. Questionnaire was administered to one hundred and fifty on (151) pregnant women attending antenatal care. Relevant maternal information was collected which include age, parity, educational status as well as the gestational age of pregnancy. Protein in urine were detected using conventional dipstick method (Sibai, 1988). Systolic and diastolic blood pressure were measured using mercury sphygmomanometer (Quinn, 1991). Edema were visibly observed in various parts of the body during antenatal visit (Macgillivray, 1983). The general condition of each woman was monitored during antenatal visit.

## **Results and Discussion**

Pre-eclampsia have been identified as the major world wide health problem associated with increased maternal death (Nadkarni *et al* 2001; Sonal *et al* 2002), intrauterine fetal growth retardation (Broughton-pipkin, 1995) and preterm delivery (Duley, 1994).

Pre-eclampsia have been observed in this study (Table 1) and it is found to be higher in primigravidae (58.62 % ) than in multigravidae (41.38 % ) (Table 2) this is correlated with the finding of (Anne *et al.*, 1998) and the result also conform with the view that pre-eclampsia is essentially a disease of primigravidae (Moodley *et al*, 1995). Pre-eclampsia is characterized by a clinical triad: hypertension, proteinuria and edema which has been observed in this study (Table 3). In Pre-eclampsia there is impaired trophoblastic invasion which can fail the spiral arteries to dilate in response to massive increase in utero-placental perfusion and this can lead to placental ischaemia. However expert believed that an ischemic placenta produced a substances referred to as factor X (free radical) which are very destructive, unstable and highly reactive. It therefore seem logical to assume that this free radical may seriously damage cellular structures, including the endothelial damage in the blood vessels which can alter blood pressure, protein level and consequently causing edema, which are the major clinical features noted in this study (Table 3).

**Table 1: Pre-eclamptic women screened during antenatal visit**

Status	Number and (%)
Pre-eclamptic	58 (38.41)
Normal	93 (61.59)
Total	151

**Table 2: Pre-eclampsia in relation to parity**

Parity	Pre-eclampsia number and (%)
Primigravidae	34(58.62)
Multigravidae	24(41.38)
Total	58

**Table 3: Clinical features of pre-eclampsia in relation to parity among women on antenatal visit**

Clinical features	Number of Primigravidae (%)	Number of Multigravidae (%)
Hbp&P	2(5.90)	4(16.70)
Hbp&E	13(38.20)	11(45.80)
E&P	17(50.00)	9(37.50)
E&P&Hbp	2(5.90)	0(0.00)
Total	34	24

**Key**

Hbp&P: High blood pressure &Protenuria

HBP&E: High blood pressure &Edema

E&P: Edema&Protenuria

E& P& Hpb: Edema, Protenuria &High blood pressure

**Table 4: Major Complain of pre-eclamptic women attending ante-natal care**

Complain	Number of Primigravidae (%)	Number of Multigravidae (%)
Headache	10(29.90)	9(34.48)
Epigastric pain	9(24.30)	6(25.86)
Visual disturbances	7(22.40)	5(22.41)
Vomiting	6(16.82)	3(12.06)
Fever	2(6.53)	1(5.17)
Total	34	24

**Table 5: Educational status of women screened during antenatal visit**

EducationalStatus	Number of Primigravidae (%)	Number of Multigravidae (%)
Educated	12(35.30)	9(37.50)
Non-educated	22(65.56)	15(62.50)
Total	34	24

Headache and epigastric pain where the commonest symptom of pre-eclampsia among primigravidae and multigravidae in this study, this finding agree with the finding of (Redman, 1994). Other symptoms recorded in this study are visual disturbances, vomiting and fever (Table4). The appearances of these symptoms is an indication of the disturbances in maternal physiology, brought about by the changes in blood pressure, lost of protein in urine as well as accumulation of fluids in the body as edema. Most of the women under study lack proper western education (Table5) which can be an important factor that prevent these women from getting proper antenatal care.

### Conclusion and Recommendations

Pre-eclampsia has been observed in this study which is characterized by a clinical triad: hypertension, proteinuria and edema. Headache and epigastric pain where the commonest symptom observed in pre-eclampsia. There is need for community health education to increased awareness of pregnant women to avail themselves of antenatal care and safe delivery in nearest health post. Majority of the patient never utilized any form of antenatal care throughout the pregnancy. If they had benefited from antenatal care, pre-eclampsia could have been detected and some form of treatments offered before the diseases progressed to eclampsia.

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