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FREQUENCY OF PREECLAMPSIA IN OBSTETRICAL CLINICS AT A TERTIARY CARE CENTER

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Abstract:

Pre-eclampsia is diagnosed when a pregnant woman develops i.e. blood pressure ≥140 mmHg systolic or ≥90 mmHg diastolic on two separate readings taken at least four to six hours apart after 20 weeks' gestation in an individual with previously normal blood pressure and proteinuria ≥ 0.3 grams (300 mg) or more of protein in a 24-hour urine sample. A total of 230 females were included in this study. The mean age of the patients was 30.23±2.45 years. The mean systolic blood pressure of all the patients was 129.45±3.45mmHg and the mean diastolic blood pressure was 85.23±2.89mmHg on two readings. Out of 230, only 68 (29.65%) patients had ≥140 mmHg systolic or ≥90 mmHg diastolic blood pressure on two separate readings. These patients were subjected to urine dipstick for proteinuria. The final diagnosis of preeclampsia was confirmed in 45 (19.56%) patients.

Keywords: Preeclampsia, Obstetrics

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INTRODUCTION:

Pre-eclampsia (PE) is a disorder of pregnancy characterized by the onset of high blood pressure and often a significant amount of protein in the urine. When it arises, the condition begins after 20 weeks of pregnancy. In severe cases of the disease there may be red blood cell breakdown, a low blood platelet count, impaired liver function, kidney dysfunction, swelling, shortness of breath due to fluid in the lungs, or visual disturbances. Pre-eclampsia increases the risk of poor outcomes for both the mother and the baby. If left untreated, it may result in seizures at which point it is known as eclampsia (1).

Risk factors for pre-eclampsia include obesity, prior hypertension, older age, and diabetes mellitus. It is also more frequent in a woman's first pregnancy and if she is carrying twins. The underlying mechanism involves abnormal formation of blood vessels in the placenta amongst other factors. Most cases are diagnosed before delivery (2).

Pre-eclampsia is diagnosed when a pregnant woman develops i.e. blood pressure ≥140 mmHg systolic or ≥90 mmHg diastolic on two separate readings taken at least four to six hours apart after 20 weeks' gestation in an individual with previously normal blood pressure and proteinuria ≥ 0.3 grams (300 mg) or more of protein in a 24-hour urine sample or a SPOT urinary protein to creatinine ratio ≥0.3 or a urine dipstick reading of 1+ or greater (dipstick reading should only be used if other quantitative methods are not available) (3, 4).

MATERIAL AND METHODS:

This cross-sectional study was conducted in Gynae & Obs. Department of Nishtar Hospital Multan. All the patients presenting with ≥20 weeks gestation in the obstetrical clinic were included in this study. Informed consent from all the patients was taken. Brief history of the patients i.e. name, maternal age, number of pregnancies, gestational age was taken. Brief examination was done. Blood pressure of all the patients was noted. Spot urine dipstick was used to evaluate the proteinuria. The data was entered and analyzed in MedCalc software. Relevant statistical analysis was performed. The qualitative variables were presented as frequency and percentages. The quantitative variables were presented as mean and standard deviation.

RESULTS:

A total of 230 females were included in this study. The mean age of the patients was 30.23±2.45 years, with minimum age of 22 years and the maximum age of 39 years. Ninety patients (40%) of the patients presented with first pregnancy. The mean systolic blood pressure of all the patients was 129.45±3.45mmHg and the mean diastolic blood pressure was 85.23±2.89mmHg on two readings. Out of 230, only 68 (29.65%) patients had ≥140 mmHg systolic or ≥90 mmHg diastolic blood pressure on two separate readings. These patients were subjected to urine dipstick for proteinuria. The final diagnosis of preeclampsia was confirmed in 45 (19.56%) patients.

DISCUSSION:

Pre-eclampsia is one of the leading causes of maternal and perinatal morbidity and mortality worldwide Preeclampsia affects approximately 2–8% of all pregnancies worldwide. The incidence of pre-eclampsia has risen in the U.S. since the 1990s, possibly as a result of increased prevalence of predisposing disorders, such as chronic hypertension, diabetes, and obesity. Nearly one tenth of all maternal deaths in Africa and Asia and one quarter in Latin America are associated with hypertensive diseases in pregnancy, a category that encompasses pre-eclampsia (5, 6).

The definitive treatment for pre-eclampsia is the delivery of the baby and placenta. The timing of delivery should balance the desire for optimal outcomes for the baby while reducing risks for the mother. The severity of disease and the maturity of the baby are primary considerations. These considerations are situation specific and management will vary with situation, location, and institution. Treatment can range from expectant management to expedited delivery by induction of labor or Caesarean section, in addition to medications. Important in management is the assessment of the mother’s organ systems, management of severe hypertension, and prevention and treatment of eclamptic seizures. Separate interventions directed at the baby may also be necessary. Bed rest has not been found to be useful and is thus not routinely recommended (1). The World Health Organization recommends that women with severe hypertension during pregnancy should receive treatment with antihypertensive agents.

Severe hypertension is generally considered systolic BP of at least 160mmHg or diastolic BP of at least 110mmHg. The intrapartum and postpartum administration of magnesium sulfate is recommended in severe pre-eclampsia for the prevention of eclampsia. Further, magnesium sulfate is recommended for the treatment of eclampsia over other anticonvulsants. Magnesium sulfate acts by interacting with NMDA receptors (3, 6, 7).

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