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Original Research Article

De novo late postpartum preeclampsia: a case report with review of literature

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ABSTRACT

De Novo late postpartum preeclampsia is defined by many authors as new onset postpartum hypertension of ≥140/90 mmHg with features of organ system malfunctioning during 48 hours to six weeks of delivery following a normotensive pregnancy and labor. Though a lesser studied condition it is responsible for more number and increased severity of maternal morbidity, mortality, and cause of post-delivery hospital admission. Its exact cause is not yet clearly defined. The incidence is 0.3-27% as noted by many authors. Patients usually present on day 7-10 with severe headaches, neurological symptoms like visual disturbances; symptoms of other organ involvement, and high blood pressure. High suspicion leads to diagnosis. Primary investigations include that for preeclampsia. The principle of management is the reduction of blood pressure, prophylactic anticonvulsants, and diuretic is considered if there are features of fluid overload. She needs constant monitoring. Post delivery women, after discharge, do not avail of home blood pressure monitoring and even the symptoms, to start with are treated with over-the-counter medication. This leads to worsening of the condition. Our patient, a primipara reported to this hospital on the 38th day of normal vaginal delivery following a normotensive pregnancy and delivery, with features of preeclampsia. The aim of publishing this case is for statistical records and create awareness of the condition. Every postpartum woman on discharge from the hospital following a normotensive pregnancy and delivery must be counseled on the significance of home BP monitoring and must consult an obstetrician on developing any new symptoms.

Keywords: De novo, Late postpartum preeclampsia, Pregnancy, Hypertension

INTRODUCTION

Hypertensive disorder of pregnancy (HDP) is a common condition that is well taken care of and in the majority of cases gets corrected following termination of pregnancy. But postpartum de novo hypertension, preeclampsia, and eclampsia are lesser-known entities despite being significant contributors to maternal morbidity and mortality, and the reason for maternal admission after delivery.[1] Though there is no clear definition by recognized authorities, many authors consider it as a de novo hypertensive disorder following delivery after normotensive pregnancy and labor and up to 06 weeks postpartum.[2,3] It is classified as early (<48 hours) or late (48 hours-06 weeks) and hypertension only; preeclampsia if features of organ dysfunction are there with hypertension, or eclampsia if convulsion is present. Incidence of de novo postpartum preeclampsia is highly variable (0.3-27.5%) as cases are either mild and go unnoticed or not reported.[1] The etiology and pathophysiology are unclear as the condition is not yet studied well. Some risk factors are noted in different studies. Elderly mother (>35 years), history of HDP in previous pregnancy, obesity, caesarean section, and high rate of intravenous (IV) fluid administration in labor.[4-6] The patients usually present around 7-10 days of delivery

following normotensive pregnancy and labor, and the usual presentation is neurological symptoms like severe headache, visual disturbances, and in more severe cases with features of focal neurological deficit, organ dysfunction, or convulsion.[7] On examination high blood pressure of ≥140/90 mmHg is recorded.[8] High suspicion leads to diagnosis. It is a diagnosis of exclusion. Differential diagnosis of de novo postpartum preeclampsia may be attributed to migraine, post-dural puncture, medications and cerebral venous thrombosis, hyperthyroidism, pheochromocytoma, and renal vein thrombosis. Management is based on the severity of the condition. A multidisciplinary approach is needed for a better prognosis. Primary investigations include Thrombocyte count, renal and liver functions, serum electrolytes, and urinary protein. Severe cases need control of blood pressure and magnesium sulphate to prevent or treat convulsions in the obstetric unit. They may need IV Labetalol followed by oral Nifedipine as it increases renal blood flow and both drugs are permitted in lactation. Oral medication helps in mild cases. We present this lesser-studied and more serious condition for statistical importance, to create awareness among family physicians so that she can avail of an early referral facility and counsel the patient on discharge after delivery following normotensive pregnancy and labor.

CASE REPORT

24-year-old primipara, a housewife, reported to a hospital on the 38th day of delivery with the complaint of severe headache for four days and blurring of vision for a few hours. There was no history of nausea, vomiting, epigastric pain, giddiness, or shortness of breath. She had a normotensive and uneventful pregnancy and labor. She was discharged from the hospital three days after delivery with analgesics for two days and continued nutritional supplementation as advised by her doctor. There was no significant medical, surgical, or history of smoking. On reporting, her BP was 190/110 mmHg. There was no evidence of edema, pallor, cardiovascular, respiratory or neurological abnormality. The patient was treated with tab. nifedipine 20 mg. thrice daily, tab. labetalol 100 mg twice daily and Magnesium sulphate loading dose of Pritchard's regimen was started. Her blood investigations showed normal complete blood counts, platelets, renal function, liver function, and coagulation profile. She had no proteinuria. The patient was referred to this institution for further management. On reporting, she had a headache. There was no blurring vision. Urine output was adequate. Her pulse rate was 72/min; BP was 180/120 mmHg; oxygen saturation was 96% on room air; BMI was 15.6 kg/m^2 and she had a normal fundoscopy. The patient was admitted with the diagnosis of de novo late postpartum preeclampsia and treated with labetalol 20 mg IV and oral nifedipine 20 mg thrice daily, completion of magnesium sulphate Pritchard's regimen and monitoring. She responded well to oral nifedipine and the dose was titrated to 10 mg twice daily. All the investigations for preeclampsia were normal. As the patient was asymptomatic and normotensive, she was discharged from the hospital 07 days after admission with antihypertensive and counselling for home BP recording, report in need, and review after two weeks. On review, she is asymptomatic and normotensive. Antihypertensive was stopped and she was asked to get her BP checked during her visits to baby clinics. On telephonic follow up she is normotensive and asymptomatic.

DISCUSSION

De novo Postpartum preeclampsia is a serious condition responsible for a significant portion of maternal morbidity and mortality. In Japan, 37% of maternal death between 2010-2015 due to pregnancy related hypertension was postpartum.[9] In the United States, postpartum hypertension was responsible for 70% of pregnancy related hypertension.[10] The exact definition, etiology, pathophysiology, and management protocol are still not well defined. De novo late postpartum preeclampsia usually develops by day 7-10.[7] Our patient reported to the hospital on day 38 of normal vaginal delivery following normotensive and uneventful pregnancy and labor with intractable headache and blurring of vision. This is the usual presentation of such patients.[1]As her BP was 190/110 mmHg; she was treated with IV Labetalol and a magnesium sulphate. This is also reported by many studies.[1,7,8] Once BP is controlled, IV antihypertensive is converted to oral labetalol or nifedipine, and the drug dose is titrated once BP is <140/90 mmHg over at least 48 hours.[1] The majority of patients recover by 08 weeks but there may be long term sequelae. Study shows that 45% of delayed postpartum preeclampsia cases develop chronic hypertension in one year.[11] Eclampsia, stroke, permanent organ damage, and death may occur without timely treatment. Considering the significant morbidity and mortality of de novo postpartum hypertensive disorders, the American college of obstetricians and gynecologists (ACOG) has recommended a modified protocol for the care of the woman during the 12 weeks following delivery, considered as the fourth trimester.[12]

CONCLUSION

After delivery following normotensive pregnancy, the women get rest but do not avail home BP measuring facility. Even symptoms of postpartum preeclampsia may be treated with over-the-counter medications which worsen the condition. Considering the high morbidity and mortality of de novo postpartum preeclampsia, all post-delivery patients on discharge from the hospital should be counselled to report to the hospital if get new onset symptoms. Awareness about the existence and seriousness of the condition among people as well as health care providers is very important to reduce maternal morbidity and mortality. Avoidance of iatrogenic risk factors like controlled fluid management in labor and caesarean section, restricting the rate of caesarean section, and reducing nonsteroid anti-inflammatory medications may reduce the incidence of this unpredictable, lesser studied,

and more serious health hazard. Proper age for pregnancy and controlled body weight before conception may also be considered preventive measures. Case reporting and research on the subject are very important in the prevention, diagnosis, and management of the pathology.

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