A CASE REPORT ON SEVERE POSTPARTUM PRE-ECLAMPSIA

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Background

Pre-eclampsia is a potentially life threatening disease, with maternal mortality rate highest after delivery. Pre-eclampsia is defined by new onset hypertension, proteinuria, gestational age greater than 20 weeks, and end organ damage.

End organ damage is seen as decreased function of major organs including the heart, kidneys and the brain. This is manifested in systemic findings including, but not limited to headaches, edema, visual disturbances, seizures and shortness of breath.

Systolic blood pressure should be equal to or greater than 140 and diastolic blood pressure equal to or greater than 90 on two separate readings.

Postpartum preeclampsia can occur within 48 hours after delivery and upto 6-12 weeks postpartum

Early diagnosis and treatment is crucial to prevent progression to eclampsia and to reduce complications and mortality.

Case Report

33 year old G2P2 female post op day 11 s/p primary C-section, with PMHx of PTSD and anxiety, and no complications during pregnancy, presented to the clinic for persistent headaches, dizziness, shortness of breath, nausea, and vomiting since delivery. She describes the headaches as 10/10 intensity, unrelieved by Tylenol or Ibuprofen. She attributed her headaches to the stress in the postpartum period.

Her vitals in the office were as follows: BMI 27, temp 97.9 F, BP 190/100, RR 22, HR 50 and pulse ox 99%

An office urinalysis dipstick was ordered and noted to be positive for ketones, 3+ blood and leukocytes. In the setting of elevated BP, proteinuria and postpartum headaches, she was referred to the ED for evaluation and management of pre-eclampsia.

In the ED, vitals were as follows: Temp 98.2 F, BP 165/95, RR: 18, HR 53, pulse ox 99%. Physical exam was otherwise unremarkable. Significant labs include CRP of 1.90, AST of 41, albumin of 2.8, total urine protein of 56.2, urine creatinine of 136.56, total protein to creatinine ratio of 0.41. Labs confirmed severe pre-eclampsia, and she was admitted to the floors for management.

She was given magnesium sulfate 4 g loading dose and 2 g per hour for 24 hours in the hospital. She was stable for discharge two days after admission, and was discharged on nifedipine 30 mg daily for blood pressure management.

Vitals

Office:
BMI 27, temp 97.9 F, BP 190/100, RR 22, HR 50 and pulse ox 99%

ED:
Temp 98.2 F, BP 165/95, RR: 18, HR 53, pulse ox 99%

Labs

Office:
u/a dipstick: 3+ blood, ++ ketones, + leukocytes

Component	Value	Ref. Range
Color, UA	Yellow	Straw, Yellow, Dark Yellow
Appearance (Urine)	Hazy (A)	Clear
Glucose, Qualitative (Urine)	Normal	Normal
Bilirubin Urine	Negative	Negative
Ketones, UA	5 mg/dL (A)	Negative
Specific Gravity, Urine	1.010	1.002 - 1.030
Blood, UA	Large (A)	Negative
pH, Urine	6.0	5.0 - 8.0
Protein, Urine	30 mg/dL (A)	Negative
Urobilinogen, UA	Normal	Normal
Nitrite (Urine)	Negative	Negative, See Note
Leukocytes, UA	Moderate (A)	Negative

ED:
CRP of 1.90, AST of 41, albumin of 2.8, total urine protein of 56.2, urine creatinine of 136.56, total protein to creatinine ratio of 0.41

Component	Value	Ref. Range
Total Protein, (Urine)	56.2 (H)	0 - 11.8 mg/dL
Creatinine, Ur	136.56	29 - 226 mg/dL
Total Protein/Creat Ratio(Urine)	0.41 (H)	<0.20

Conclusion

Severe pre-eclampsia could present in the post partum setting for the first time. It is important to keep this as a differential despite an uncomplicated and unremarkable pregnancy. Preeclampsia should be treated with magnesium and blood pressure management utilizing labetalol, hydralazine or nifedipine. Timely diagnosis and treatment are critical to prevent poor outcomes including stroke or death.

Discussion

Pre-eclampsia is commonly diagnosed after 20 weeks gestation and prior to delivery. Postpartum preeclampsia can occur within 48 hours of delivery and up to 6-12 weeks Postpartum.

Risk factors for pre-eclampsia include pregestational diabetes mellitus, chronic HTN, autoimmune disorders, obesity, CKD and maternal age less than 20 years or greater than 40 years.

Common symptoms in pre-eclampsia include headache, visual disturbances such as blurry vision or light sensitivity, abdominal pain, nausea, vomiting, altered mentation, edema, and dyspnea.

Those who are high risk of pre-eclampsia with BMI > 30, nulliparity, family hx or personal hx of preeclampsia, age > 35 yrs or in vitro conception can be given aspirin 81 mg daily starting gestational age 12-16 weeks till delivery as prophylaxis.

Without treatment, pre-eclampsia can progress to HELLP syndrome, which consists of hemolysis, elevated liver enzymes and low platelets. HELLP Syndrome is life threatening and has a poor prognosis. Untreated preeclampsia could also lead to pulmonary edema, stroke, seizures and permanent damage to end organs including the brian, kidney and liver.

Definite treatment of pre-eclampsia during pregnancy is delivery. HTN is managed with hydralazine, methyldopa, nifedipine or labetalol. In the postpartum setting, magnesium is given for seizure prophylaxis

While on magnesium, the patient should be monitored for magnesium toxicity every 2 hours. Toxicity is seen with loss of deep tendon reflexes or respiratory distress. Mg toxicity is treated with calcium gluconate

References

Miles JF Jr, Martin JN Jr, Blake PG, et al. (1990). Postpartum eclampsia: a recurring perinatal dilemma. Obstetrics and Gynecology, 76(2), 328-333. doi: 10.1097/00006250-199008000-00027.

Wagner, L. K. (2004). Diagnosis and management of preeclampsia. American Family Physician, 70(12), 2317-2324. PMID: 15617298.

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