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CASE REPORT

A Case of Chronic Hypertension with Superimposed Preeclampsia in Hypertensive Emergency

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Abstract

Preeclampsia is defined as BP > 140/90 mmHg on 2 occasions 4-6 hours apart, which occurs in pregnancy after 20th week of period of gestation, which involves multi organ system. Hypertensive emergency is a spectrum of Preeclampsia which is an acute crisis. We present a case, from our clinic, of a pregnant woman who was referred here with Hypertensive emergency, she was a known case of chronic hypertension with superimposed preeclampsia in hypertensive emergency, and was managed effectively with Anti hypertensives and was taken up for emergency Lscs and was managed in ICU post-operatively and was alter discharged after her recovery.

Keywords

Severe preeclampsia, Postpartum, Complications

Introduction

Hypertensive disorders in pregnancy (HDP) are the spectrum of disorders ranging from already existing chronic hypertension in the index pregnancy to complex multisystem disorder like preeclampsia leading to the complications like eclampsia, HELLP syndrome, acute renal failure, pulmonary edema, stroke and left ventricular failure.

The National High Blood Pressure Education Program (NHBPEP) Working Group on High Blood Pressure in Pregnancy defined Hypertensive disorders in pregnancy as Blood pressure more than 140/90 mmHg taken at least 4 hours apart on two separate occasions during pregnancy [1].

Hypertensive crisis is acute increase in BP > 180/120 mmHg. When it is associated with end organ damage (Myocardial infarction, Renal damage etc) it is called as Hypertensive emergency else as Hypertensive urgency [2]. In these patients, blood pressure should be lowered within 24 to 48 hours in order to avoid hypertensive target organ damage [2].

Chronic hypertension in pregnancy is defined as hypertension before pregnancy or before 20th week of gestation, on more than one occasion at least 4-6 hours apart, and persists for after 12th week of period of gestation. When it is associated with one or more features of pre-eclampsia it is called as pre-eclampsia superimposed on chronic hypertension [1].

Case Presentation

- My Patient, 36-years-old Primigravida with 9 months of amenorrhea came to Bharati hospital referred from a private practitioner in view of raised BP of 200/150 mmHg
- At presentation in EMD she complained of

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headache and blurring of vision since 1 day

- Headache was localized in the occipital region, throbbing type, not relieved on rest
- No c/o nausea, vomiting, epigastric pain
- No c/o pain in abdomen, per vaginal discharge
- Fetal movements well appreciated

Menstrual history

- LMP: Not known
- PMH: 4-5 days/28-30 days/RMF
- AGA: 38 weeks 2 days
- EDD: 26/1/21

Obstetric history

- Married since 1 year, non consanguineous marriage
- G1- present pregnancy, spontaneous conception, registered at a private practitioner.
- Diagnosed with increased BP at 3rd month of amenorrhoea -> was started on Tab Labetalol 100 mg bd
- Diagnosed with Hypothyroidism since 3rd month of amenorrhoea -> was started on Tab L-Thyroxine 25 mcg OD
- Antihypertensives were stepped up to Tab Nifedipine Retard 20 mg Bd together with Tab Labetalol 100 mg BD since 1 month
- H/o anemia present -> was given 5 injection Iron Sucrose 15 days back
- Past history- NAD
- Family history - Mother and Father are Hypertensives on treatment
- Patient was seen in EMD→

General physical examination

- Height: 154 cm, Weight: 95 kg, BMI: 42 kg/m^2
- Afebrile, pallor present
- P-84 bpm; bilateral pedal oedema present, Urine albumin- 4+, spO_2- 99% on Room air
- DTR- Brisk
- BP: 200/150 mmHg in right brachial artery
- → INJ labetalol 10 mg i.v. given, INJ MGSO4 4 gm i.v. given → Repeat BP 150/100 mmHg (in 10 minutes)
- RS-airway entry equal on both sides, no basal crepitations,
- CVS-S1 S2 normal

Per abdomen examination

Inspection

- Abdomen longitudinally ovoid
- Linea nigra, stria gravidarum seen, abdominal wall oedema +

Palpation

- Uterus- 34 WK period of gestation, Relaxed. Abdominal wall edema and obesity present
- Fundal grip-soft, non ballotable part s/o breech
- Lateral grip-Irregular, knob like structure on right side s/o limbs; smooth, curved shaped structure on left side s/o back
- Pawlik grip-hard, globular, ballotable structure s/o head
- Pelvic grip-hands converging-head not engaged

Auscultation

- FHS - regular, 148 bpm on left spinoumbilical line
- Pv-cervix soft, posterior, osclosed, unaffected
- Non stress test - non-reactive
- Diagnosis-Primigravida with 38 weeks 2 days pregnancy with chronic hypertension with superimposed preeclampsia with anaemia with FGR with hypothyroidism with impending eclampsia in Hypertensive emergency
- Patient was shifted to Labor Room after starting zuspan regimen
- In LR -> Foleys catherization done, Her BP was 220/140 mmHg -> INJ Labetalol 20 mg i.v. given → BP repeated after 15 mins, which was 190/120 mmHg → IN Labetalol 40 mg given → Repeat BP after 20 min was 190/120 mmHg
- Capsule Nifedipine 10 mg given → Repeat BP after 20 mins was 220/150 mmHg → Cap Nifedipine 10 mg repeated → BP was 170/110 mmHg after 10 minutes

Her investigations were sent

- Hb/TLC/Plt- 8.7/9300/2.04, PCV-22, Total Bilirubin/Direct Bilirubin- 0.2/0.1
- SGOT-17, SGPT-10, T. PROTEIN-3.46, SERUM ALBUMIN-**1.82**, ALP-297
- PT-10.7, APTT-26.7, INR-0.91, Sr. Creatinine- 0.64, Na/K/cl- 130/4.5/109
- LDH-**439**, BSL Random-100
- Ultrasound (outside report) -> single live intrauterine pregnancy of 34 weeks 6 days, AFI-9-10 cm, EFW-2.4 kg, FGR+
- Gestosis score in my patient = **10**

- 1 PCV was issued for anaemia (HB = 8.8%) and, patient was shifted for Emergency LSCS
- On table was 140/90 mmHg -> Lscs was done under spinal anaesthesia
- LSCS done uneventfully -> Patient was shifted to ICU. Intraoperatively ascites noted. Baby boy 2.6 kg
- In ICU her BP increased to 160/110 mmHg -> INJ Labetalol 20 mg IV given

Patient was shifted to ICU immediate post-operative and was started on Inj Labetalol infusion. On 2nd post-operative day, her Blood pressure was maintaining between 150/100 mmHg to 140/90 mmHg, hence patient was shifted out of ICU to HDU and was started started on Tablet Nifedipine R 20 mg BD.

Her blood pressure was maintaining between 130/90 to 120/80 mmHg on 3rd post-operative day, hence was discharged on Capsule Amlodipine 5 mg OD with an advice of Home BP monitoring and was explained about the early warning signs of eclampsia.

She followed up on 7th post-operative day in OPD for suture removal with home BP monitoring sheet which showed her BP to be in normal range, hence her Anti Hypertensives were stopped. Her suture removal was done and wound was healthy.

Discussion

Hypertensive crisis is acute increase in BP > 180/120 mmHg. When it is associated with end organ damage (Myocardial infarction, Renal damage etc) it is called as Hypertensive emergency else as Hypertensive urgency [2]. In these patients, blood pressure should be lowered within 24 to 48 hours in order to avoid hypertensive target organ damage. Preeclampsia is a multisystem organ involving diseases that is specific to pregnancy which causes endothelial malfunction and generalized vasospasm and results in various complications such as DIC, HELLP, Liver and renal damage, PRES etc [3]. Failure of clinicians to predict the impending life-threatening complications from preeclampsia may contribute to rise in maternal mortality due to this disease and its associated complications.

Early detection/diagnosis and appropriate management is extremely important in patients with preeclampsia, for better maternal as well as perinatal outcome.

Conclusion

This case report of patient who presented with 38 weeks of pregnancy, with complaints of headache and blurring of vision with BP 200/150 mmHg with heavy proteinuria of 4+ on dipstick in Hypertensive emergency. Timely intervention and prompt action saved serious maternal and foetal complications and the patient was discharged on oral antihypertensives. HDPs are associated with substantial maternal complications, both acute and long-term. History taking and examinations plays a proper role in screening of pregnant women with HDP. Also, educating women regarding the impending sings of preeclampsia during antenatal care and importance of home blood pressure monitoring should be highlighted.

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