

A Study on Chronic Hypertension in Pregnancy in a Tertiary Care Hospital

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Abstract

This is a retrospective study on antenatal mothers with chronic hypertension detected either preconceptionally or before 20 weeks of gestation, carried out during a period of 6 months from February 2017 to July 2017 at Government Rajaji Hospital, Madurai. During that period a total of 198 mothers with hypertension were seen. Among them, 32 patients had chronic hypertension (16.2%). One patient was detected in previous pregnancy and continued antihypertensive medication postpartum as she was diagnosed to have chronic hypertension. All other patients were newly diagnosed before 20 weeks of gestation (96.8%). 5 patients out of 32 patients had superimposed preeclampsia (15.6%) among which 3 patients (60%) had super added proteinuria alone, one patient had HELLP syndrome (20%) and one patient had imminent eclampsia (20%). *Objective:* To study the incidence, associated risk factors, co-morbidities, complications and pregnancy outcome in antenatal mothers with chronic hypertension.

Keywords: Chronic Hypertension; Proteinuria; Preeclampsia.

Definition

Chronic Hypertension

Hypertension detected prior to conception or diagnosed before the 20th week of gestation. Hypertension diagnosed for the first time during pregnancy which does not resolve post-partum is also defined as chronic hypertension.

Preeclampsia

Blood pressure of $\geq 140/90$ mm Hg after 20 week of gestation, if prior blood pressure is unknown and accompanied by proteinuria are considered sufficient for the diagnosis of preeclampsia.

The diagnosis of preeclampsia in absence of proteinuria is highly suggestive when hypertension is accompanied by renal insufficiency, liver involvement, neurological involvement or hematological involvement.

Methods

Antenatal women who were either known hypertensive disorder or newly diagnosed were recruited. All patients were evaluated on detection of hypertension for other co-morbidities and renal, liver and haematological parameters, fundus examination, cardiac, endocrine evaluation, USG and Doppler studies. The patients were kept on strict followup. Initially, patients were started on single antihypertensive medication tablet labetalol 100 mg twice daily and continued with the same if there was adequate control. In case of uncontrolled hypertension, either the dose was increased or a second drug added.

Whenever patient had BP more than 149/90 or new compliants, patients were admitted. After admission, the patients were monitored for blood pressure and urine excretion every 6 hrs. Full bloodcounts, coagulation profiles, liver functions, creatinine clearance, and urinary protein levels were

measured 2–3 times per week. For fetal monitoring, non-stress tests (NSTs) were performed twice weekly. Moreover, ultrasound assessment of fetal growth and amniotic fluid index measurement were performed weekly and AFI and Doppler parameter were done twice weekly whenever deranged. Elective termination was advised in all patients at 38 weeks of gestation.

In patients with uncontrolled HT, imminent eclampsia, HELLP syndrome, early termination was done after giving lung maturity. LSCS was reserved for obstetric indication.

Result

The study was conducted on antenatal women who were either a known case of hypertension or newly diagnosed over a period of 6 months from February 2017 to July 2017 at Government Rajaji Hospital, Madurai. Out of 198 hypertensive women, 32 patients had chronic hypertension (16.2%). 1 patient was detected as hypertensive in the previous pregnancy and diagnosed as chronic hypertension in postnatal followup and was on continuous medication. All other patients were newly detected before 20 weeks of present gestation (96.8%).

Table 1: Age distribution

| | |
|-------------|----------|
| 20 - 25YRS | 3 (9%) |
| 25 - 30 YRS | 23 (72%) |
| 30 YRS | 6 (19%) |

Table 2:

| | |
|-----------------------------------|------------|
| Total No of Women with Chronic Ht | 32 |
| -Without Superimposed Pe | 27 (84.4%) |
| -With Superimposed Pe | 5 (15.6%) |
| *Proteinuria | 3 (60%) |
| *HELLP | 1(20%) |
| *Imminent eclampsia | 1 (20%) |

Table 3:

| | |
|---------------------------|------------|
| 1 st trimester | 5 (15.6%) |
| 2 nd trimester | 21 (65.6%) |
| 3 rd trimester | 6 (18.8%) |

The patients were divided into chronic hypertension without superimposed preeclampsia and chronic hypertension with superimposed preeclampsia. 5 patients had superimposed preeclampsia (15.6%). Among them, 3 patients were detected based on the appearance of proteinuria (60%). One patient developed HELLP syndrome (20%) and the other patient developed imminent symptoms (20%).

Based on parity, chronic hypertension was more common in multigravida (21 patients- 65.6%) than in primigravida (11 patients- 34.4%) which is contrast to Preeclampsia which is more common in primigravida.

2 patients (6.3%) had associated grade 1 hypertensive retinopathy and advised control of hypertension. 1 patient (3.1%) had glaucoma. 2 patients (6.3%) had moderate anemia and treated with blood transfusion. One patient had type 2 DM and her USG showed missed abortion and hence MVA was done. 1 patient had APLA positive and she was started on tablet aspirin 75mg once daily.

According to the trimester in which the women were recruited in the study, One patient from first trimester underwent MVA for missed abortion. One patient from second trimester on two antihypertensives had imminent symptoms and delivered a preterm baby by LSCS. One patient presented with HELLP syndrome was also induced and delivered a preterm baby vaginally. Both babies were admitted in NICU. Fetal and neonatal outcome of chronic hypertension include increased prevalence of IUGR (intrauterine growth retardation), prematurity and perinatal mortality. One patient had early diastolic notch in bilateral uterine arteries in second trimester ultrasound. She was started on tablet aspirin 75 mg once daily and kept under regular followup. Other patients were on uneventful follow up.

Early onset hypertension, Doppler abnormalities, IUGR and requirement of two drugs to control hypertension all indicate severity of the condition and hence adverse perinatal and maternal outcome. Overall, the earlier the onset of hypertension, more is the complication but earlier detection of undiagnosed

hypertension helps to reduce preventable morbidity and mortality.

Conclusion

Chronic hypertension is a high risk factor complicating pregnancy. Antenatal mothers should be advised regarding the symptoms suggestive of complications to report immediately and the importance of stringent follow up. They should be counselled about the high maternal and perinatal morbidity and mortality .

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