



FUNDUS OCULI CHANGES IN PREGNANCY INDUCED HYPERTENSION

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ABSTRACT

AIM: To study the Fundus Oculi changes in the cases of Pregnancy induced Hypertension

MATERIALS AND METHODS: This is a Prospective Observational study conducted at the Department of Ophthalmology of Gandhi Hospital during June 2015 to May 2016. 100 cases of Pregnancy induced Hypertension referred to the department of Ophthalmology for Fundus Oculi examination were included in the study. Cases who were having Primary or Secondary Hypertension were excluded from the study. All cases were examined by an experienced Ophthalmologist using Snellen's Chart, Slit Lamp, Direct and Indirect Ophthalmoscope and 90D Biomicroscope. All cases fundus oculi were photographed by fundus camera for documentation.

RESULTS: 55 women had normal fundus study. 23 had grade I Hypertensive retinopathy changes. 15 had grade II Hypertensive retinopathy changes. 3 had grade III Hypertensive retinopathy changes. 4 had grade IV Hypertensive retinopathy changes.

KEYWORDS : Fundus oculi, Hypertensive retinopathy, Pregnancy induced hypertension

INTRODUCTION:

Pregnancy induced hypertension (PIH) was classified as gestational hypertension, preeclampsia, severe preeclampsia and eclampsia¹. PIH is a hypertensive disorder in pregnancy that occurs after 20 weeks of pregnancy in the absence of other causes of elevated blood pressure (BP) (BP >140/90 mmHg measured two times with at least of 4 hour interval) in combination with generalized edema and/or proteinuria (>300 mg per 24 hrs). When there is significant proteinuria it is termed as preeclampsia; seizure or coma as a consequence of PIH is termed as Eclampsia.

Pregnancy induced Hypertension is classified as Mild PIH case will have + Proteinuria and BP of 120/90mm of Hg, Pre Eclampsia case will have++ Proteinuria and BP of 140/100mm of Hg, Severe Pre Eclampsia ++++ Proteinuria and BP of >150/110 mm of Hg and Eclampsia in which patient will have all signs of Severe Pre Eclampsia and Patient will through fits². Patients will be sent to department of Ophthalmology for evaluation of Fundus Oculi.

According to Modified Keith Wegners classification of Hypertension, it is classified into 4 grades³.

Grade I: Arteriolar spasm will be there

Grade II: Alteration of AV ratio, AV crossing changes, Few hard exudates and cotton wool spots and flame shaped hemorrhages.

Grade III: Multiple flame shaped hemorrhages, Cotton wool spots, Hard exudates, Macular Star (Edema), Retinal Edema.

Grade IV: Papilloedema, Exudative Retinal detachment.

Grade I and Grade II hypertensive retinopathy changes women can continue pregnancy with strict control of Blood pressure with anti hypertensives and by monitoring fetal growth⁴. Women having Grade III and Grade IV Hypertensive retinopathy changes cannot continue Pregnancy as it become detrimental to maternal and fetal life⁵. Role of Ophthalmologist is crucial in guiding Obstetrician by seeing the fundus Oculi changes.

MATERIALS AND METHODS:

This is a prospective Observational study conducted at the Department of Ophthalmology of Gandhi Hospital during June 2015 to May 2016.

100 cases of Pregnancy induced hypertension referred from the department of Obstetrics and Gynaecology for evaluation of fundus were included in the study. Cases with Primary and secondary hypertension were excluded from the study. Informed consent was taken from all patients. All patients were examined by an experienced Ophthalmologist using Snellen's chart, Slit lamp, Direct and Indirect Ophthalmoscope and 90D fundus examination. Pupil of all cases were dilated by instilling Combination eye drops of 1% Tropicamide and 5% Phenylephrine. Detailed examination of Fundus Oculi was done using Direct and Indirect Ophthalmoscopy. Cases were also examined by 90D biomicroscopy using Slit lamp. All cases were documented by taking fundus Photograph on Fundus Camera.

RESULTS: 55 cases didn't had any Hypertensive Retinopathy changes in the fundus Oculi. 23 cases had Grade I Hypertensive retinopathy changes. 15 cases had Grade II Hypertensive retinopathy changes. 4 cases had Grade III Hypertensive retinopathy changes. 3 cases had Grade IV Hypertensive retinopathy changes.

DISCUSSION: R N Bakhda et al⁶ studied 300 cases of pre eclampsia and Eclampsia. They found normal fundus in 147 (49%) cases, which is consistent with over study. They had 153 (51%) of grade I hypertensive retinopathy. 77(26%) cases of Grade II Hypertensive retinopathy. 50 (16%) cases had grade III Hypertensive retinopathy changes. 10 (3%) cases had grade IV Hypertensive retinopathy changes. Severity of Hypertensive retinopathy was noted more in their study than in our study. This is because they had included Eclampsia cases also in their study. Whereas in our study we had only Pre Eclampsia and severe Pre Eclampsia cases. We didn't included Eclampsia cases.



Figure showing Grade IV Hypertensive retinopathy (Papilloedema)

CONCLUSION: It is concluded that though 55 cases didn't had any fundus changes. Considerable number had mild to severe hypertensive retinopathy changes which will lead to Maternal and fetal morbidity. Severe grade of hypertension can lead to sight threatening complication in mother and life threatening complications in fetus and mother. Fundus oculi changes which occurs during gestation because of PIH will disappear within 4-6 weeks after normal delivery or termination of pregnancy.⁷

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Conflict of Interest: None

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