



## EVALUATION OF OXIDATIVE STRESS IN PREGNANCY INDUCED HYPERTENSION

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**ABSTRACT** The present study has been undertaken to evaluate oxidative stress in pregnancy induced Hypertension. study comprised 250 subject, 125 normal pregnant Women without any complication were taken as control and 125 pregnant women with PIH were taken study cases, Normal Gynecological examination and history based information's were taken from each subject. Fasting blood sample were analyzed for free radical estimations. Our study shows a significant change in free radical level compared to control study. Concluded that Pregnancy Induce Hypertension can be result of increased oxidative stress. Study conclude that by improving oxidative stress with proper antioxidant diet or therapy we can decrease or minimize the risk associated with pregnancy induced hypertension.

**KEYWORDS :** Plasma MDA, PIH, Preeclampsia

### I INTRODUCTION

Hypertensive disorders of pregnancy represents a heterogeneous complex of disease. Hypertension is a sign not a disease. Higher the blood pressure greater is the risk. If hypertension is uncontrolled, convulsions may develop and each fit pushes the patients towards grave prognosis. Different studies concluded that calcium homeostasis is an important aspect of maternal and fetal physiology during gestation.<sup>(1,2,3,4)</sup>

This observation suggests that in hypertensive disorders of pregnancy there is a imbalance between lipid per oxidation and antioxidant vitamin status because of oxidative stress. The decreased serum concentration of the antioxidant vitamins supports the hypothesis that lipid per oxidation is an important causative factor in the pathogenesis of preeclampsia. The rise in antioxidants is probably to compensate the increased peroxide load in severe preeclampsia. So in order to evaluate oxidative stress in pregnancy induced hypertension patient was planned.

### II MATERIAL AND METHODS

The study was conducted on total 250 patients who have been admitted in the department of obstetrics and gynecology MGM medical college and associate My hospital Indore from July 2012 to may 2013. 125 normal pregnant women were taken as control and 125 pregnancy induced Hypertensive women taken as study cases. A detailed history about age, residence, literacy occupation etc. was noted with general physical and obstetric examination. Blood Sample were collected from each subject blood sample were analyzed for free radicals levels by thiobarbituric acid reactive substance estimation, by fully automated biochemistry analyzer.

### III RESULTS

Comparison of free radicals levels between Normotensive pregnant women and PIH women.

Parameter	Control n=125	PIH Cases n=125	P Value
Plasma MDA Nmol/ml	2.8 ± 0.48	5.2 ± 0.92	<0.001

The result of this study Presented in the Table. Significant increase Level of MDA Level was observed in pregnancy Induced Hypertension women when compared to control.

### IV DISCUSSION

In pregnancy Induced Hypertension variable involvement of multiple organs. The classical Triad of Hypertension, Proteinuria and edema is still the most common presentation. All these problems can be prevented to a certain extent if the condition is diagnosed at an early stage. Several attempts have been made to diagnose preeclampsia as early as possible and thus help in reducing the significant maternal and fetal risk associated with it. PIH is also associated with endothelial dysfunction.<sup>5,6,7</sup> our study revealed that there was significant increase in MDA levels was observed there is reasonable evidence to suggest that circulating neutrophils of patient with preeclampsia release an excess of reactive oxygen species.<sup>8,9,10</sup> Study concluded that the pregnancy induced Hypertension is associated with increased oxidative stress. So addition antioxidant in treatment of pregnancy

induced Hypertension we can minimize the risk associated with PIH.

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