

THE SIGNIFICANCE OF LIPOPROTEIN DEPOSITION IN THE RETINA OF PREGNANT WOMEN AS A MARKER OF PREECLAMPSIA, IUGR AND OTHER RELATED MATERNAL AND FETAL COMPLICATIONS

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Abstract

Background: Preeclampsia is a disorder characterized by three main clinical features, these are hypertension, edema and proteinuria. Fibrin deposition in various tissues can be easily demonstrated by microscopical examination, however this requires a biopsy. Fortunately, the eye is the mirror of the body.

Objective: To detect the deposition of fibrin in the eyes of pregnant women within the first two weeks of the third trimester before the women become preeclamptic, through simple ophthalmoscopy

Methods: 42 primigravida pregnant women were chosen as a study group, which include those women in whom hard exudate (Lipoprotein deposition) was detected at 28-30 weeks of gestation in their retina through simple ophthalmoscopy examination. While another control group of 46 women were selected in whom examination of the eye for hard exudate was negative. Both groups were followed routinely in the

third trimester and screened for any complication, which may develop.

Results: The incidence of preeclampsia, oligohydramnios, placenta abruption was significantly higher in the study group than in the control group, 45.23% vs 13.04, 28.57% vs 2.17 % and 16.66 % vs 2.17 % respectively. While the incidence of IUGR and perinatal death was still higher in the study group than in the control group 28.57 % vs 2.17 % and 9.52 % vs 0.00 %.

Conclusion: Simple ophthalmoscopic examination of the pregnant women eyes for the presence of hard exudate (Lipoprotein deposition) may be useful in sorting high-risk women for preeclampsia and its related complications.

Key words ; Preeclampsia, hard exudate, retina, lipoprotein

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Introduction

Preeclampsia is a human pregnancy specific disorder characterized by three main clinical features these are hypertension, edema and proteinuria^[1-3]. In the last twenty years, much work has been done to elucidate its precise etiological factors. Nowadays it is well established that preeclampsia is a disease of the placenta itself.

The placenta of those women liable to develop preeclampsia differ from those with normal pregnancy by two aspects from

biochemical point of view, they produce higher ratio of PG F2@ to that of PG E2. Also, they produce higher amount of placental renin, which is physiologically indistinguishable from the renal renin. the increased production of placental PG F2@ is responsible for the wide spread but low grade activation of the coagulation cascade, ultimately leading to wide spread deposition of fibrin in almost every organ in the body like the liver, spleen and kidneys.

While the increased production of placental renin is responsible for the development of hypertension, through the mechanism of angiotensin^[3,4]. The entire above finding is mediated by defective placentation and occurs as early as 12-14 weeks of gestation, and probably mediated by defective immune response^[6,7]. Fibrin deposition in various tissues can be easily demonstrated by microscopical examination

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