prospective study of fibronectiv In pre_eclamptic patients

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Preeclampsia is a multisystem disease typically occurring in the latepregnancy, the usual clinical manifestation being hypertension, proteinuriaand oedema. In recent years, an increasing amount of evidence supportsthe concept that preeclampsia is an endothelial disease. The purpose of ourstudy was to evaluate the extent to which vascular endothelial celldysfunction is involved in the pathophysiology of preeclampsia. So, thepossible relation between nature, severity of preeclampsia and plasmafibronectin, antithrombin III and az- antiplasmin was studied.This study has been done on 100 patients attending the obstetric andgynecology department Benha University Hospital and kafr shokr GeneralHospital from January 1992 to November 1993. The cases were classifiedto the following groups:- Control non pregnant women comprises 10 cases.- Normal pregnant group comprises 20 cases (10 primigravidae and 10multigravidae).- Chronic hypertensive pregnant patients comprises 20 cases (10 mild and10 severe).- True preeclamptic patients comprises 20 cases (10 mild and I0 severe).- Severe preeclamptic patients with disseminated intravscular coagulation(DIC) comprises 10 cases.The age of all cases ranged from 20-45 years old. All cases weresubjected to full clinical examination and laboratory investigations. fromall cases the venous blood were taken, plasma were separated andestimated for fibronectin by radial immunodiffusion and antithrombin III,U2-antiplasmin by chromogenic methods.The following results were obtained:The plasma fibronectin was significantly increased in normalprimigravidae than control non pregnant, in normal multigravidae thannormal primigravidae, in true preeclamptic patients than normalprimigravidae and in severe true preeclamptic patients than mild one. Also,it was significantly increased in superimposed preeclamptic patients thanchronic hypertensive pregnant patients and in severe superimposedpreeclamptic patients than mild one. But, it was significantly decreased insevere preeclamptic patients with DIC than without Die. Thesefibronectin patterns could be explained by either vascular endothelialinjury release, increased production, enzymatic degradation resulting inmultimers, decreased excretion of fibronectin or may be due to itsincorporation into fibrin clot.On the other hand, plasma antithrombin III and U2- antiplasminwere significantly decreased in true preeclamptic patients than normalprimigravidae. Also, u2- antiplasmin was significantly decreased insuperimposed preeclampsia than chronic hypertensive pregnant patients.Furthermore, the antithrombin 1I1 and u2- antiplasmin were significantlydecreased in severe preeclampsia with DIC than

without. These findingsexplained by either enhanced consumption, decreased synthesis orincreased excretion of both antithrombin III and u2-antiplasmin.Moreover, there was significant positive correlation betweenfibronectin and maternal age, parity in normal pregnancy. While, there wassignificant negative correlation between plasma fibronectin and plateletcount, placental weight, foetal weight and Apgar score in preeclampsia. Atthe same time there was significant positive correlation between U2-antiplasmin and foetal, placental weight and Apgar score in preeclampsia.So, we conclude that the increased plasma fibronectin is of value furthe nature and severity of preeclampsia as the high level of plasmafibronectin supports, the vascular endothelial injury theory and the severityof preeclampsia as it increased in severe preeclampsia than in mild one.However, the decreased plasma level offibronectin is of value in severepreeclampsia complicated with DIe. Moreover, the increased plasmafibronectin is of value for foetal outcome assessment as the increasedplasma fibronectin was negatively correlated with foetal weight and Apgarscore.While, the decreased plasma antithrombin III and u2-antiplasminactivities are of diagnostic and prognostic value specifically in severepreeclampsia as they significantly decreased. And , the low level of U2-antiplasmin is of value for foetal outcome assessment as it is significantlypositively correlated with foetal weight and Apgar score in preeclampsiaRecommendation:The estimation of plasma fibronectin, antithrombin IIIU2- antiplasmin are essential, for early diagnosis of preeclampsia,development of complicated preeclampsia with disseminated intravascularcoagulation (Ole) and foetal outcome assessment.