LOW PLASMA 8-EPIMER OF PROSTAGLANDIN F2ALPHA IN THE INTRAHEPATIC CHOLESTASIS OF PREGNANCY: EVIDENCE OF OXIDATIVE STRESS

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Background: Oxidative stress is believed to contribute to the pathogenesis of many complications of pregnancy. The cause is primarily unknown, although ischemia-reperfusion injury is one possible mechanism. The aim of this study was to detect the predictive values of 8-epimer of prostaglandin F2alpha (8-iso-PGF2α), superoxide dismutase (SOD) and glutathione peroxidase (Gpx) in the intrahepatic cholestasis of pregnancy (ICP). Methods: Forty patients with ICP and forty-seven normal pregnancy controls were included in the study. Maternal plasma levels of 8-iso-PGF2α, SOD and Gpx from patients with and without ICP were measured by enzyme-linked immunosorbent assay (ELISA). Results: Plasma 8-iso-PGF2α and Gpx were lower (P=0.006 & P=0.002, respectively) in the ICP versus control groups, but SOD was no significant in the two groups. And a negative relationship was found between 8-iso-PGF2α and total bile acid (TBA) (Spearman's correlation coefficient, r=-0.277, P=0.01). In addition, there is a positive relationship between 8-iso-PGF2α and SOD (r=0.458, P=0.001). Conclusions: The results indicate that there is an inverse correlation between plasma 8-iso-PGF2α and the severity of ICP. The clinical severity of this pathology is closely related to the degree of lipid peroxidation, and the defensive role of the antioxidant system fails in the presence of lipid peroxidation damage in ICP.