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P123. EVALUATION OF OXIDATIVE STRESS AND ANTIOXIDANT STATUS IN DIABETIC AND HYPERTENSIVE WOMEN DURING LABOR

Alshebly M (SA) [1]

Objective:
Pregnancy in insulin-dependent diabetes mellitus is associated with a greater incidence of fetal abnormality. Animal studies suggested that increased free-radical production and antioxidant depletion may contribute to this risk. So the objective of this work was to investigate oxidative stress and antioxidant capacity in pregnancies with hypertension, diabetes mellitus (insulin dependent diabetes mellitus), as well as a healthy control group.
Methods:
Simultaneous determination of glutathione peroxidase (GSH-PX), glutathione reductase (GSH-Red), superoxide dismutase (SOD) activities, total antioxidant and thiobarbituric acid reactive-substances (TBARs) levels were carried out in maternal plasma during the delivery.
Results:
Plasma GSH-PX activity was found to be significantly increased in hypertensive and in insulin-dependent diabetic pregnancies (IDDP). This enzyme represents about twofold higher activity than those of the control group. While plasma SOD activity was significantly decreased in both groups when compared to the control group ($P<0.05$). No significant differences were detected in GSH-Red activity between diabetic, hypertensive and control groups. Alterations in enzyme activities were accompanied by a significant increase in the levels of plasma TBARs in hypertensive and IDDP. Plasma level of total antioxidant was also significantly increased in diabetic as compared with control group.
Conclusion:
On the basis of above results, it may be concluded that alterations in antioxidant-pro-oxidant components, may result in various complications including peroxidation of vital body molecules resulting in increased risk for pregnant women as well as fetus.

[1] KING SAUD UNIVERSITY