



Antioxidant role in Recurrent Abortion

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Abstract:

Recurrent miscarriage is an obstetrical challenge to the obstetrician especially when no clear cause can be found. This study was undertaken to investigate the antioxidant /oxidant status in recurrent miscarriage patients. METHODOLOGY Antioxidants including glutathione peroxidase, catalase, glutathione reductase, reduced glutathione and selenium as well as the oxidants hydrogen peroxide, oxidised glutathione and lipid peroxidation were assayed in plasma, whole blood and placental tissue of non-pregnant women (NP), healthy pregnant women (HP), and recurrent miscarriage (RM) patients. RESULTS All antioxidant activities and levels in plasma and whole blood of HP women were consistently moderately lower, and much more significantly lower in RM patients when both were compared to those seen in NP women; $P < 0.05$ and $P < 0.0001$ respectively. Furthermore, whereas plasma antioxidant activities and levels were significantly lower in RM patients, those of whole blood and placental tissue were much more significantly lower when compared with HP women; $P < 0.001$ and $P < 0.0001$ respectively.



Concurrent with these findings there were consistent increases of equal statistical significance and magnitude in the levels of all investigated oxidants assayed in all samples when compared inbetween subjects of the study as indicated above. Data thus illustrated a distinct shift in favor of oxidative reactions and reactive oxygen species (ROS) generation, in whole blood and placental tissue of RM patients when compared to HP and NP women; $P < 0.0001$. CONCLUSION The above noted oxidative stress could have been a major causative factor of recurrent miscarriage.