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**Correlation of lipid peroxidation and glutathione levels with severity of systemic lupus erythematosus: a pilot study from single center.**

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**PURPOSE:** Systemic Lupus Erythematosus (SLE) is a multifactorial chronic autoimmune disease with unidentified etiology. **Imbalance of oxidative status is one possible cause of active disease.** Plasma malondialdehyde (MDA) and plasma glutathione (GSH) level have been used as a determinate of oxidative status. Limited data has examined these 2 parameters by severity of SLE. **METHODS:** We determined whether there was an association between plasma MDA and plasma GSH level with the severity of SLE. Forty four SLE patients (2 Men and 42 Women) and twenty healthy volunteers (3 Men, 17 women) participated in this study. SLE participants were classified by the severity of disease (mild, moderate or severe). The plasma MDA and plasma Glutathione levels were measured. The correlation of plasma MDA and plasma GSH levels with the severity of SLE disease were determined. **RESULTS:** Plasma MDA levels with different severity of SLE (mild, moderate, and severe of SLE patients) were not significantly different from those of the control group ( $p=1.0$ ). **Plasma GSH levels were significantly lower in the moderate and severe SLE groups than the control group ( $p=0.001$ ).** In addition, a significant correlation between plasma GSH and severity of SLE was observed. (Pearson correlation coefficient =  $-0.428$ ,  $p<0.001$ ). The relationship could be described by the equation  $GSH \text{ level (microM)} = (-7.624) \text{ SLEDAI score} + 545.90$ . **CONCLUSION:** **A significant correlation between plasma GSH and SLE severity exists that may aid evaluation of the disease severity and usefulness of the treatment of SLE.**

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