

**EPOSTER PRESENTATION**

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# Assessment of oxidative stress parameters in HIV infection

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## Background

Both viral and host factors are responsible for oxidative stress in HIV disease, which in turn activates the replication of HIV provirus by various pathways. Oxidizing stress is a pathologic phenomenon resulting from imbalance between the system producing active oxygen species and those defending the organism. The present study was aimed to assess oxidative stress markers in HIV patients.

## Methods

The study included 30 HIV sero-positive patients, 30 healthy volunteers served as controls. Patients were categorized on the basis of their absolute CD4 counts into 3 groups - Group-1 (>500 CD4 cells/mm<sup>3</sup>), Group-2 (200–499 CD4 cells/mm<sup>3</sup>), and Group-3 (<200 CD4 cells/mm<sup>3</sup>). Lipid peroxidation was estimated using serum malondialdehyde as a marker, serum nitric oxide levels were assessed by Griess reagent method, serum reduced GSH by Beutler *et al*, serum C reactive protein, serum AOPP by Witko Savark method and serum proteins by Bradford method. Statistical analysis was done using the Student's t test and one-way ANOVA.

## Results

Significant decrease ( $p < 0.004$ ) in GSH levels and significant increase ( $p < 0.0008$ ) in NO levels was observed in HIV infected group when compared to controls. However, no significant changes were found in levels of AOPP, MDA, and CRP in the study groups. Significant increase ( $p < 0.0001$ ) in MDA levels in group 3 and in GSH levels ( $p < 0.0395$ ) in all 3 groups was seen as compared to controls.

## Conclusion

The findings indicate that considerable amount of oxidative stress are induced and changes in NO and GSH levels may contribute to the immunopathophysiology during HIV infection.

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