

## **Antioxidants Reveal Protection against the Biochemical Changes in Liver, Kidney, and Blood Profiles after Clindamycin/Ibuprofen Administration in Dental Patients**

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**Abstract :** The adverse effects of Clindamycin (Clind.) / Ibuprofen (Ibu.) combination on liver, kidney, blood elements and the significances of antioxidants (N-acetylcysteine and Zinc) against these effects were evaluated. The study includes: Group I; control n=30, Group II; patients on Clind.300mg/Ibu.400mg twice daily for a week n=30, Group III; patients on Clind.300mg/Ibu.400mg+N-acetylcysteine 200mg twice daily for a week n=15 and Group IV; patients on Clind.300mg/Ibu.400mg+Zinc50mg twice daily for a week n=15. Serum malondialdehyde (MDA), alanine transferase (ALT), aspartate transferase (AST),  $\gamma$  glutamyl transferase (GGT), creatinine, blood urea nitrogen (BUN) were measured. Applying one way ANOVA followed by Tuckey Kramer post test, Group II showed significant increase in ALT, AST, GGT, BUN and decrease in Hb, RBCs, platelets than Group I. Group III showed significant decrease in ALT, AST, GGT, BUN than Group II. Moreover, Group IV showed significant decrease in ALT, AST, GGT and increase in Hb, RBCs, and platelets than Group II. Conclusively, Adding Zinc or N-acetylcysteine buffer the oxidative stress and improve the therapeutic outcome of Clindamycin/Ibuprofen combination.

**Keywords :** clindamycin, ibuprofen, adverse effects, antioxidant, zinc, N-acetylcysteine

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