

Evaluation of lipid peroxidation and antioxidant status in saliva of oral cancer –a case control study.

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ABSTRACT

The objective of the present study was to evaluate the magnitude of oxidative stress and antioxidant involvement in Oral cancer. Twenty normal healthy subjects in the age group 40 - 60 years served as control (group I) and clinically confirmed patients of Oral cancer of the same age served as (group II) subjects. The following biochemical parameters which includes Lipid peroxides, Glutathione & Protein were assayed in saliva. Antioxidant enzymes which includes Glutathione peroxidase and Catalase, non-enzymatic antioxidants such as Ceruloplasmin, Vitamin E & C were determined in saliva. Significantly low levels of Salivary antioxidants such as Ceruloplasmin, and Vitamin E & C were observed in group II subjects when compared to those of controls ($p < 0.001$). However, lipid peroxidation levels was higher & the Protein level was significantly decreased in oral cancer ($p < 0.001$). Glutathione peroxidase was significantly decreased in group II when compared to healthy controls ($p < 0.01$). Catalase activity does not show significant changes in group II subjects. The findings suggest that oxidative stress altered salivary composition in oral cancer subjects there by, reducing enzymatic and non-enzymatic antioxidants. The study concludes that the above mentioned parameters would be good bio indicators for diagnosis and prognosis of Oral cancer in saliva which are sensitive, accurate & cost effective