

Bio markers in saliva of Type I diabetes mellitus for diagnostic and prognostic significance.

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ABSTRACT

Salivary biomarkers of Type I Diabetes mellitus in the twenty clinically confirmed type 1 diabetic patients were compared with age matched normal healthy subjects. Salivary and plasma levels of glucose and protein were estimated. Lipid peroxide levels (LPO), glutathione, antioxidant enzymes such as glutathione peroxide, catalase and non enzymic antioxidants such as ceruloplasmin, vitamin E and C were estimated in the saliva. Glucose levels in serum and saliva were increased in the diabetic subjects whereas protein a level does not show any changes. Salivary LPO levels were significantly increased whereas glutathione level was decreased in the diabetic subjects. Ceruloplasmin, vitamin C levels & catalase activity does not show any changes in the diabetic subjects when compared with normal counterparts. Vitamin E & glutathione peroxidase was significantly decreased in diabetic subjects when compared with normal subjects. Interpretation & Conclusion: The study concluded that salivary glucose & LPO was increased, enzymatic and non-enzymatic antioxidant levels were decreased in the saliva of Type I Diabetes mellitus, suggesting that saliva (biological fluid) may be used as biomarker, to overcome the patients "fear of pain" associated with the frequent long term monitoring & management of Type I Diabetes mellitus.