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Title:	Alterations in some Oxidative Stress Markers in Diabetic Nephropathy
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Keywords:	Micro albuminuria Malondialdehyde (MDA) Superoxide Dismutase (SOD) Glutathione (GSH) Diabetic nephropathy
Issue Date:	2017
Publisher:	EManuscript Services
Citation:	Journal of Cardiovascular Disease Research, 8(1), pp. 24-27
Abstract:	<p>Background: Diabetic nephropathy is the most common cause of end stage renal disease. Oxidative stress is being considered as a common pathogenic factor in diabetes mellitus and its complications. Aim: To assess the level of oxidative and antioxidative markers in Type 2 diabetes mellitus patients with micro albuminuria and without micro albuminuria, in North West Indian ethnic population. Material and Method: Serum level of malondialdehyde (MDA), superoxide dismutase (SOD), reduced glutathione (GSH), glutathione peroxidase (GPx) &amp; glutathione reductase (GR) were estimated in controls ( Group-1), Type 2 diabetes patients without micro albuminuria (Group-2) and Type 2 diabetes patients with micro albuminuria (Group-3). Results: Serum MDA level was significantly increased by 204.71 (p &lt; 0.001) and 291.09% (p &lt; 0.001) in Type 2 diabetes patients without (Group-2) and with micro albuminuria (Group-3) with respect to control subjects (Group-1). A significant increase in MDA levels by 28.35% (p &lt; 0.05) was found in Group-3 in comparison to Group-2. The activity of SOD, GSH, GR and GPx was significantly reduced by 46.01% (p &lt; 0.01) in Type 2 diabetes patients without and with micro albuminuria in comparison to healthy control group. A similar trend of significant decrease in SOD, GSH, GR and GPx levels was also recorded in Group-3 with respect to Group-2. Conclusion: The results of present study suggested that oxidative stress increases in diabetic patients. Further micro albuminuria accelerates the oxidative stress in these patients and hence could be responsible for the pathophysiology of various vascular complications. Larger studies need to be undertaken to substantiate the above mentioned findings.</p>
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