Role of glycoxidated IgG in type 2 diabetes mellitus: A clinical study

Sidra Islam
J.N Medical College, India

IgG is the most abundant protein found in body fluids. It has a high content of arginine and lysine residues making it a good target for post translational modifications (PTMs). Glycation and oxidation are inextricably interlinked PTMs. Several studies have reported the simultaneous production of hydroxyl radical (OH•), a reactive oxygen species, along with methylglyoxal, a potent glycating agent in the body. These glycoxidation products are known to contribute an important role in the etiopathogenesis of diabetes mellitus and its long term complications. In this background, we probed the involvement of hydroxyl radical (OH•) modified glycated IgG in diabetes patients. Sera from type 2 diabetes patients showed preferential binding to glycoxidated IgG compared to its native counterpart as evaluated by direct binding ELISA, Inhibition ELISA and gel retardation assays.

The results suggest that OH• induced modifications of glycated IgG generate neoepitopes that can serve as reliable marker for evaluation of disease severity.

Notes: