

Original

Alterations in Von Willebrand Factor in Diabetic Vascular Disease

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Study was undertaken on 82 patients with noninsulin dependent diabetes to characterise the role of von Willebrand factor (VWF), a glycoprotein synthesized and stored in the vascular endothelium, in vascular complications associated with the disease. An elevated level of this factor was observed only in those patients with macrovascular complications. This is due to endothelial damage in diabetics, related to the duration of the disease. Absence of a raised level of VWF in our diabetics with microvascular disease may suggest the role of other influencing factors such as geographical and or racial differences in the clinical features and pathogenesis of diabetes. Bahrain Med Bull 1995;17:

Accelerated micro- and macro-vascular diseases are well known complications of both insulin dependent and non insulin dependent diabetes mellitus¹⁻³. The pathogenesis of diabetic angiopathy is not well understood. A variety of potentially aggravating factors are involved at different stages of the angiopathic development. Endothelial damage is considered an early event in vascular damage^{4,5}. Von Willebrand Factor (VWF) which circulates in the plasma as part of Factor VIII complex is important for platelet adhesion, and for ristocetin induced platelet aggregation⁶⁻⁷. As it is primarily produced by the endothelium changes in plasma levels may indicate altered endothelial function⁸.

In early studies, elevated plasma levels of VWF in diabetic subjects were found only in the presence of vascular disease⁹⁻¹¹. However several investigators have reported increased levels of VWF in diabetic patients without clinical vascular disease¹²⁻¹⁴. The present study was carried out to establish whether the levels of VWF are*** abnormal in the absence of vascular disease and whether the level correlates with the advancement of vascular disease in diabetics.