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LEVELS OF NATURAL ANTICOAGULANTS, ANTITHROMBIN III AND PROTEIN C IN DIABETES VASCULAR DISEASE

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Accelerated micro and macro vascular thrombotic disease is characteristic of diabetes mellitus. A hypercoagulable state is appreciated in this disease. We studied levels of natural anticoagulants such as Antithrombin III (AT III) and protein C which are factors to counteract the effects of hypercoagulable state. Both AT III and protein C levels were found decreased in diabetics with macrovascular disease suggesting that natural mechanism of anticlot formation are also affected in these patients, thus may be contributing to the thrombotic complications. Bahrain Med Bull 1995;17(4):

Inherited deficiencies of Antithrombin III (AT III) and Protein C are known to be associated with thrombotic diathesis[1,2]. In addition to congenital deficiencies acquired defects of AT III and Protein C has also been reported in clinical conditions associated with increased tendency to thrombosis[3,4]. AT III is a serine protease inhibitor that plays an important role in regulating blood coagulation. It inactivates thrombin and factors Xa, IXa,XIa and XIIa, thereby limiting clot formation[4]. Protein C is a vitamin K dependent protein which contains several gamma carboxyglutamate residues, binds Ca++ and has an anticoagulant activity[5,6].

We initiated this study to investigate whether patients with diabetes mellitus, who have a high incidence of thrombotic complications, have any abnormality of AT III and/or Protein C[7].