



Haemostatic changes associated with thrombosis in long term hemodialysis treatment

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Abstract:

Abstract: In end-stage renal disease, particularly when treated with haemodialysis, the function of platelets, coagulation and fibrinolytic systems can be disturbed; those patients may show both thrombotic complications and bleeding abnormalities. Thus, it is essential to investigate haemostatic alterations in patients on hemodialysis so that adequate regime for anticoagulant therapy could be implemented. Haemostatic changes in patients on hemodialysis may result from alterations in vessel wall integrity and platelet function, and reduced blood flow in the native arteriovenous fistula. We study the haemostatic abnormalities associated with thrombosis in long term hemodialytic patients to determine whether coagulation and fibrinolysis are enhanced or not in 42 uremia patients on chronic regular hemodialysis treatment (20 of them had history of thrombotic events "group I" and the remaining 22 patients showed no history of thrombosis" group II") and 20 apparently health control group. Plasma levels of some blood coagulation fibrinolysis parameters were measured including platelet count, prothrombin time/concentration (PT/PC), activated partial thromboplastin time (aPTT), thrombin time (TT), fibrinogen and D-Dimer, platelet aggregation (induced by adenosine diphosphate, collagen, Ristocetin, and Arachidonic acid), and the levels of natural anticoagulant protein C, protein S and antithrombin-III (AT-III). The mean platelet count was normal in all studied groups, while higher mean value of platelet count was observed among patients in group I than group II. Prolonged PT/sec., aPTT/sec and TT in patients groups were observed; those differences were statistically highly significant in comparison with healthy controls (p

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