

HOW TO AVOID HEMORRAGIC COMPLICATIONS DURING COMBINED ANTITHROMBOTIC PROPHYLAXIS OF HEMODIALYSIS VASCULAR ACCESS

Sukhanov V, Vlasova N, Petrova O

Intensive Care Unit, Region Hospital N°1, Ekaterinburg - Russian Federation

Introduction/Aim. High bleeding tendency during combined (warfarin plus antiplatelet therapy) antithrombotic treatment remains the problem in chronic hemodialysis (HD) patients. The aim of this study was to determine the optimal dose of permanent anticoagulant prophylaxis (PAP) combined with intermittent antiplatelet therapy (APL).

Patients and Methods. We investigated 127 pts on maintenance HD (mean time on dialysis 2.8 years). All pts had native arterio-venous fistula (AVf). We employed the rotational thromboelastography (TEG) (ROTEM, Pentapharm) for evaluation of blood coagulation ("r" – reaction time; normal range: 640 – 900 s) and fibrinolysis (normal range: 70 – 130%). APL (Vasonit - pentoxifylline, 300-600 mg) was started 4-6 hours after cessation of HD and was repeated only on the second day (300-600 mg). Pts treated with PAP (warfarin-Nycomed) were divided into three groups: Group 1 had INR below 1.5, Group 2 – between 1.5-2.0 and Group 3 – above 2.0.

Results. Table 1 presents data of our investigation. These data demonstrate that the main difference between Group 1 and Group 2 is more active fibrinolysis ($p < 0.05$), and hence only 3 minor vs 12 minor hemorrhagic events, respectively. The pts of Group 3 have marked hypocoagulability of blood and hyperfibrinolysis (correlation coefficient, $r = 0.45$, $p < 0.5$), and hence have had 21 minor and 3 major hemorrhagic events. No AVf thrombosis was encountered during the follow-up (24 ± 8 months) in all three groups.

In conclusion: Thromboelastography provides a new methodology to estimate adequacy of combined antithrombotic prophylaxis in HD pts with minimum risk of hemorrhagic complications. The optimal dose of warfarin is INR level below 1.5. Hyperfibrinolysis may be one of the main reasons of bleeding in HD pts.

	TEG r (s)	fibrinolysis (%)	INR
INR < 1,5 (n = 57)	674±134	65 ±30	1,25 ±0,11
INR = 1,5 - 2 (n = 41)	703±127	114±35 $p < 0,05$	1,71±0,15
INR > 2 (n = 29)	1696±717, $p < 0,05$	197±81 $p < 0,05$	2,89±1,34