

THROMBOPHILIA IN HEMODIALYSIS PATIENTS OF THE NORTHERN REGION OF THE RUSSIAN FEDERATION

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OBJECTIVES

Thrombophilic disorders are one of the causes of adverse outcomes in patients on hemodialysis.

METHODS

The analysis of clinical and laboratory data of patients of the dialysis Department of the First city clinical hospital of emergency medical aid for them. E. E. Volosevich, Arkhangelsk city was done.

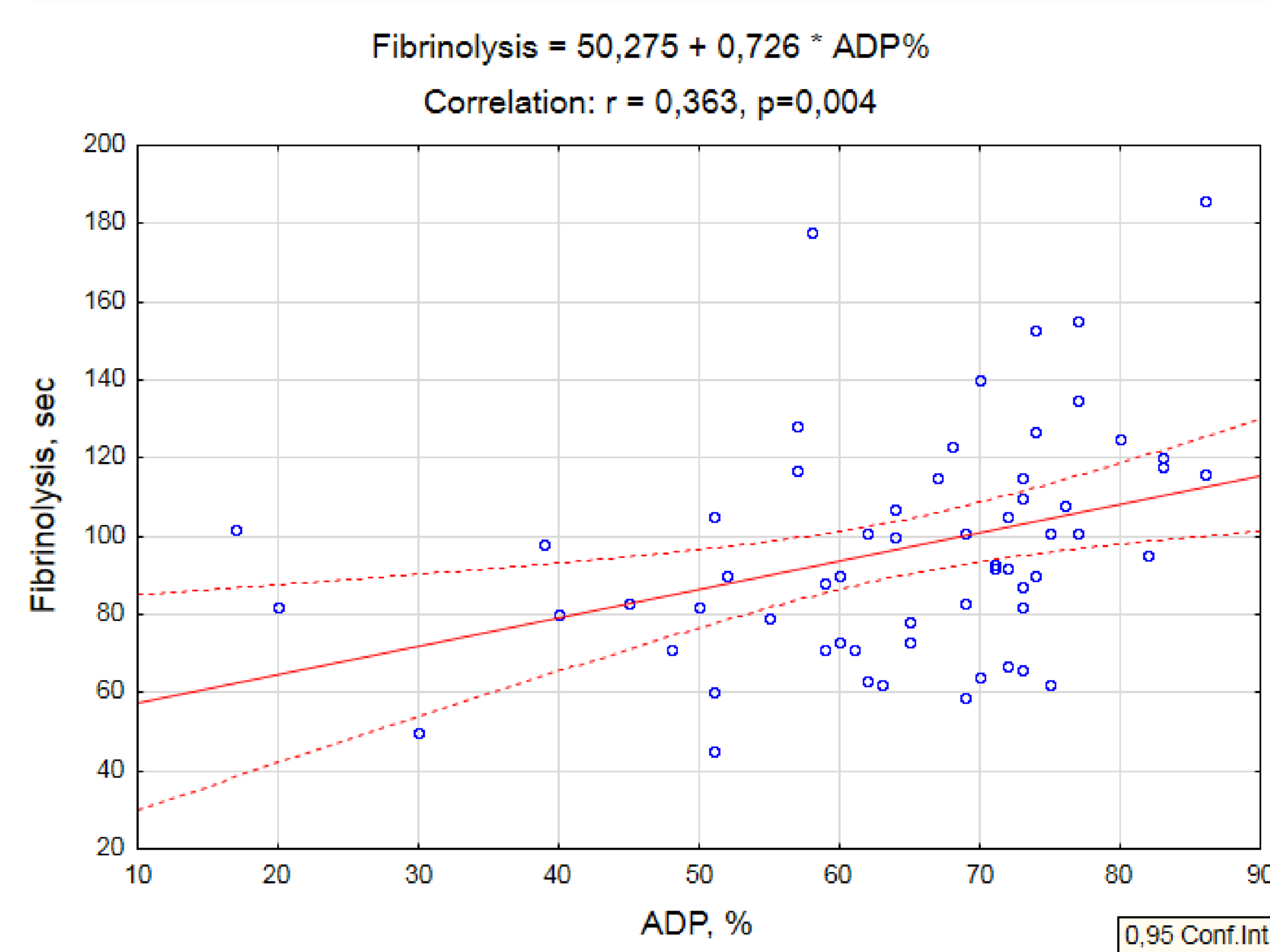
We examined 61 patients, 30 men and 31 women. The average age of 47.4±10.7 years. All patients were treated with bicarbonate hemodialysis for 120,6±66.8 months. Vascular access in 52 people was the AV fistula is and 9 – a prosthesis. Thrombosis of the fistula was recorded in 28 of them (54.1 per cent): 1 times 17 (27,7%), 2 times in 6 (9,8%), 3 and 4 times respectively from 1 (1.7%) and more than 4 times in 3 patients (4.9 per cent). Among patients 14 patients (22,9%) did not smoke never, 37 (60,7%) smoked and stopped, 10 (16,4%) smoke at the present time. Unfavorable heredity on cardiovascular pathology was noted in 28 patients (45.9 per cent). Among them, 10 people have been diagnosed with coronary artery disease.

The parameters of coagulogramme we determined on Whole-Blood Aggregometer 590-4DR, CHRONO-LOG CORPORATION, USA and ROTEM DELTA THROMBOELASTOGRAPH, France

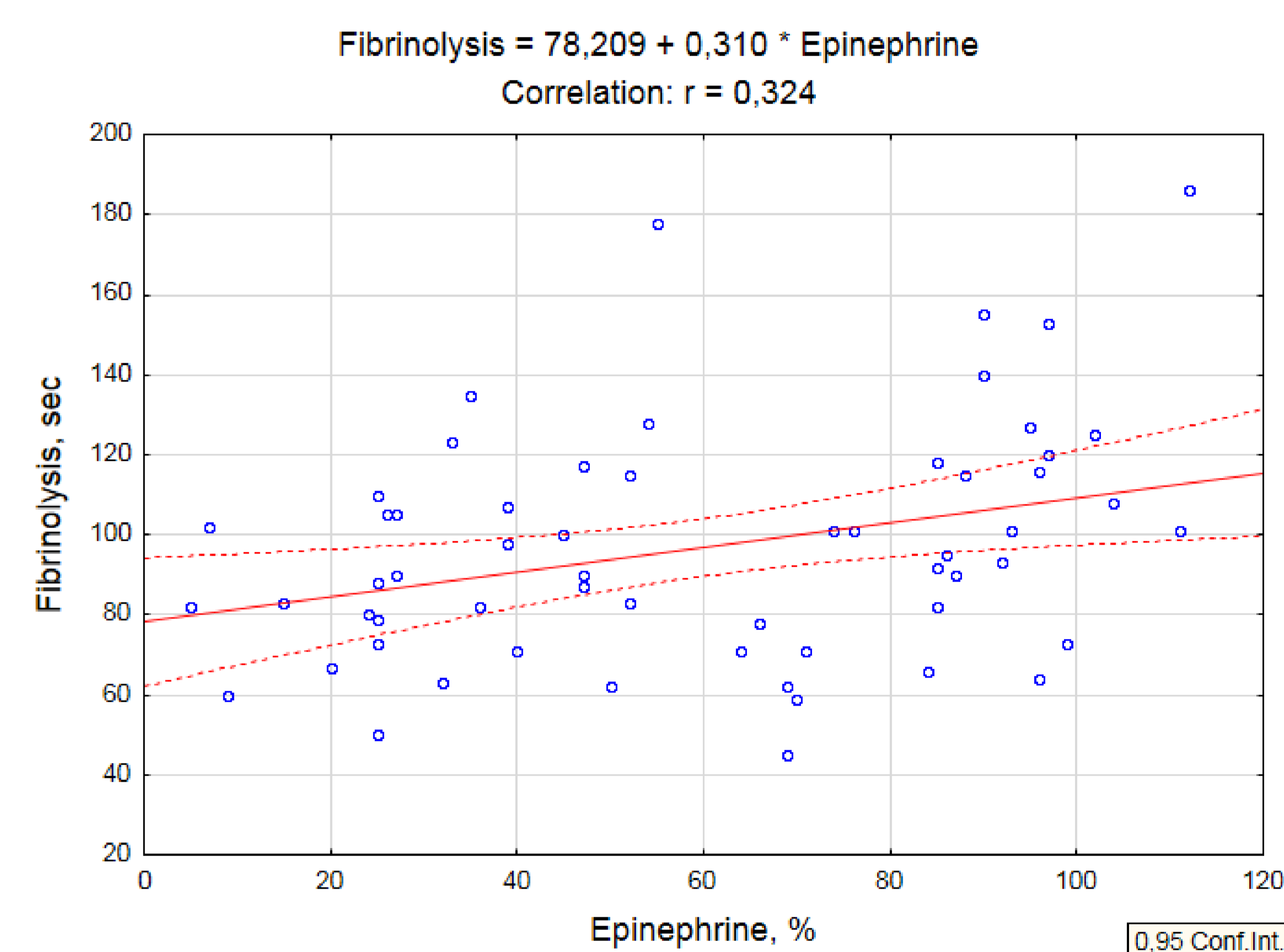
ABSTRACT

Coagulation testified to the presence of signs of thrombophilia in 50 (81.9% of) people. In particular, it was noted a longer duration of fibrinolysis and 96.4±29,1 h, the concentration of complexes of fibrin monomer to 20.0±18,7 mg/DL, the concentration of D-dimer to 5.0±22,7 mg/ml, PAI-1 up to 140,9±19,9 ng/ml. the platelet aggregation with ADP and adrenaline were reduced respectively to 64.1±14.6% and 60,1±30.5 per cent. The influence of age, sex, Smoking, presence of coronary artery disease on the fact of thrombosis of AV fistula was revealed. The presence of vascular prosthesis combined with an increase in APTT compared to AV fistula, respectively 49,0±37,0 and 35.8±3,1 sec, p=0.011. Hypotension increased the risk of thrombosis of AV fistula 4.2 [1.4-13.0] %, $\chi^2=5.547$, p=0.019. In patients with hypotension compared to the others was the high level of D-dimers (respectively of 13.03±of 37.68 and 0.81±0,82 mg/ml, p=0.046) and PAI-1 (respectively 148,4±18.2 and 136,8±19,9 ng/ml,p=0.030). However, showed correlations of systolic blood pressure, not only from the concentrations of D-dimers (Rs=-0.316, p=0.014) and PAI-1 (Rs=-0.289, p=0.026), but the platelet aggregation stimulated by epinephrine (Rs= 0,352 p=0.006).

There was obtained direct correlation between the duration of fibrinolysis and levels of induction of platelet aggregation with ADP and epinephrine (picture 1 and 2). This indicates a depression of the internal mechanism of fibrinolysis in connection with release reaction activation.



Picture 1. Interrelation between fibrinolysis and thrombocyte activation with ADP



Picture 1. Interrelation between fibrinolysis and thrombocyte activation with epinephrine

CONCLUSION

The prevalence of signs of thrombophilia among our dialysis patients is very high, which is accompanied by thrombosis of AV fistula in more than 50% of cases.

REFERENCES

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