Blood rheology in women with recurrent/late abortion while receiving intravenous Immunoglobulin

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Introduction: Patients with recurrent abortion in the present gravidity were treated with passive immunotherapy. During the treatment the changes of rheological parameters were investigated.

Methods: Plasmaviskosity was determined using KSPV 1 Fresenius; Erythrocyte aggregation using the MA1-Agregometer and Erythrocyte deformability by means of Rheodyn, Myrenne.

Results: Between January 2013 and December 2014 a total of 58 patients were included into this open-end investigation. Until the end of the 24 week of pregnancy, patients were treated with 3 g Sandoglobulin i.v., maximally for 7 cycles.

At the end of 2014, 38 of 46 women with immunotherapy (82,6%) had a successful live birth. Pv showed no changes during the therapy. Erythrocyte aggregation showed a statistically significant elevation from the 3rd cycle of treatment, while a striking temporary increase in erythrocyte rigidity until the end of the 1st trimester was noticed that was followed by an increase of deformability from the beginning of the 2nd Trimester with a constant negative correlation with the gestational age.

Conclusion: We believe that the continuously elevation of the erythrocyte aggregation is the print of the physiological hypercoagulability that starts at the same time, while the temporary increase in erythrocyte rigidity followed by improvement of deformability during 2nd trimester is the result of pregnancy induced haemodilution.