Rheopheresis in vascular diseases

Melinda Vass¹, Ágnes Diószegi¹, Norbert Németh², Viktória Sógor², Sándor Baráth³, László Módis⁴, Pál Soltész¹
¹Department of Internal Medicine, Division of Angiology, Medical University of Debrecen
²Department of Operative Techniques and Surgical Research, Medical University of Debrecen
³Department of Laboratory Medicine, Medical University of Debrecen
⁴Department of Ophthalmology, Medical University of Debrecen

Aim: In Hungary the first rheopheresis treatment was done at the University of Debrecen, Clinical Center, Division of Angiology in July 2014.

Methods: Rheopheresis is a double cascade filtration system. After the plasma separation the MONET filter retains the high molecular weight proteins from the plasma. According to the ASFA 2014 guideline rheopheresis is recommended first line therapy in age-related macula degeneration. In 2014 a patient with AMD was treated with rheopheresis. We performed 11 treatments in 6 cycles. We assessed the visual acuity, stiffness parameters, endothelial function, plasma and whole blood viscosity, prothrombotic activity. We measured phagocyte activity activated monocyte ratio, erythrocyte aggregability before and after the treatments. We also performed rheopheresis in a diabetic foot patient suffering from non-healing ulcers.

Results: Rheopheresis treatment lowered the plasma and whole blood viscosity. Endothelial function was restored. Stiffness parameters significantly improved. Plasma and whole blood viscosity normalized. We detected antiinflammatory and antithrombotic effects of rheopheresis as well. In AMD patient the visual acuity significantly improved. In diabetic foot syndrome we could reach complete wound healing.

Conclusions: Rheopheresis has a complex vascular effect. Our results suggest that rheopheresis could be a new therapeutical option in other vascular diseases as well.