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Treatment of diabetic foot ulcers with physical medicine modalities

Grzegorz Onik¹, Katarzyna Knapik¹, Karolina Sieron¹, Karol Monkos² and Ludmila Slowinska²¹Medical University of Silesia in Katowice, Poland²Medical University of Silesia in Katowice, Poland

Diabetic foot ulcers treatment requires multidisciplinary approach. To reduce the lower limbs amputations rate, various procedures are applied. Physical medicine modalities may complement standard treatment. Variable magnetic fields, low-level laser therapy and local hyperbaric oxygen therapy are frequently applied modalities in Poland to promote diabetic foot ulcers. These procedures are proved to stimulate epithelialization, new blood vessels creation and reduce pain. The study aims were to assess the rheological properties of blood in people with diabetic foot ulcers and the influence of local hyperbaric oxygen therapy on rheological properties of blood in people with diabetic foot ulcers. Study included 36 people divided into two groups. Study group constituted 16 people with diabetic foot ulcerations: 2 females and 14 males with mean age: 66.66 ± 9.39 years. Control group constituted 20 healthy people: 14 females and 6 males with mean age: 52.6 ± 7.24 years. In study group, rheological properties of blood were assessed twice: Before and after treatment with local hyperbaric oxygen therapy. In diabetic patients, in comparison with healthy subjects, increased blood and plasma viscosity were obtained. Erythrocytes' aggregation parameters were altered also. Application of local hyperbaric oxygen therapy resulted in blood viscosity decrease at shear velocity equal 150 s^{-1} . The influence of local hyperbaric oxygen therapy requires further research. However, obtained results may encourage for usage of this modality as wounds healing was enhanced.

Biography

Grzegorz Onik is a Physiotherapist and a Lecturer at Medical University of Silesia in Katowice in Department of Physical Medicine.

grzegorz-onik@o2.pl

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