

# **The first clinical experience of direct gene therapy using VEGF and bFGF in treatment patients with critical lower limb ischemia**

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## **Abstract**

In this paper we present the clinical observation of successful treatment of distal form of peripheral artery disease of the lower extremity with symptoms of critical ischemia in a 60 years old patient. Intramuscular injection of dual expression plasmid, encoding vascular endothelial growth factor VEGF and basic fibroblast growth factor FGF2, was performed to the affected lower extremity. The effect of treatment was evaluated by functional tests: measurement of ankle-brachial index, treadmill test, the recovery time, shoulder-ankle index after strain and temporary occlusion. Performed immunohistochemical examination of biopsy samples of the affected lower extremity muscles.

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## **Keywords**

Critical ischemia, Dual expression plasmid, Gene therapy, Muscle biopsies, Peripheral artery disease