







Short-term outcomes of intra-arterial catheter-directed thrombolysis for acute limb ischemia: a single-center experience

 **Nikolina Jupek**^{1,*},
 **Ana Šutalo**²,
 **Ivana Jurca**²,
 **Mislav Puljević**^{1,2},
 **Dražen Perkov**²,
 **Karlo Novačić**²,
 **Majda Vrkić Kirhmajer**^{1,2}

¹University of Zagreb, School of Medicine, Zagreb, Croatia

²University Hospital Centre Zagreb, Zagreb, Croatia

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***ADDRESS FOR CORRESPONDENCE:** Nikolina Jupek, Medicinski fakultet Sveučilišta u Zagrebu, Šalata 3b, HR-10000 Zagreb, Croatia. / Phone: +385911866532 / E-mail: jupek.nikolina@gmail.com

ORCID: Nikolina Jupek, <https://orcid.org/0000-0001-8212-9040> • Ana Šutalo, <https://orcid.org/0000-0002-7644-6362>
Ivana Jurca, <https://orcid.org/0000-0002-0607-3361> • Mislav Puljević, <https://orcid.org/0000-0003-1477-2581>
Dražen Perkov, <https://orcid.org/0000-0001-5398-059X> • Karlo Novačić, <https://orcid.org/0000-0001-5860-8551>
Majda Vrkić Kirhmajer, <https://orcid.org/0000-0002-1340-1917>

Background: Acute limb ischemia (ALI) is defined as a sudden decrease in limb perfusion that requires urgent treatment¹. Treatment methods include surgical, endovascular and hybrid revascularization. The aim of this study is to investigate the results of intra-arterial catheter-directed thrombolysis (CDT) in adult patients with acute limb ischemia, treated at University Hospital Centre Zagreb.

Patients and Methods: Between 2012 and 2022, 48 patients with ALI, symptoms no longer than 14 days, and viable extremity were treated with CDT. Clinical success was defined by an increase in the ankle-brachial index (ABI) by at least 0.15 and the absence of rest pain, while technical success is defined as complete thrombolysis of more than 95% of the thrombus or almost complete thrombolysis of more than 70% of the thrombus with continuous flow in at least one crural vessel, without distal thromboembolism.

Results: The median duration of symptoms was 3 days, during CDT a median dose of 33.0 mg of alteplase was administered, and the median duration of application was 22 hours. Out of 48 patients, clinical success was achieved in 81.3% of patients and technical in 77.3%. During CDT, 5 patients had a total of 6 major complications (5 major bleeding and 1 major amputation). A statistically significant association was found between clinical success and intervention on native blood vessels vs "in-stent" occlusion, venous bypass, and synthetic bypass graft ($p < 0.001$). Adverse clinical outcomes were associated with occlusion length > 20 cm ($p = 0.005$), major complications ($p = 0.023$), and pre-interventional statin use ($p = 0.015$). Also, patients with clinical success had a significantly higher ABI after a procedure ($p < 0.001$).

Conclusion: CDT is an effective method of treating ALI, especially in native vessels with occlusion length less than 20 cm. Careful patient selection is needed for high clinical and technical success and an acceptable number of major complications.

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LITERATURE

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