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Poster

Overcoming Technical Challenges Posed by EKOS Catheter in Peripheral Vascular Thrombolysis.

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Abstract

Purpose: Acute limb ischemia is a life-threatening event. Material and Methods: We retrospectively reviewed data of 7 patients with acute limb ischemia who underwent CDT using a 5.3 Fr EKOS catheter system between January 2011 and July 2012. Three had bypass graft occlusions (femoro-popliteal), three native vessel occlusions (femoro-popliteal) and one extensive clot from femoral to tibial vessels. In occluded grafts, tip of the EKOS was placed in the distal graft. In the rest it was placed beyond the trifurcation with the most distal being in the plantar arch. The distal vessels were of small caliber and the proximal of diminutive caliber (average luminal diameter 2.6mm.) In most of patients a treatment zone from 12- 50cm was used. In one long segment occlusion, a long sheath was placed proximally and tPA was infused via the sheath and EKOS catheter. Patients were followed up the next day after overnight thrombolysis using tPA .They were closely monitored for complications including vessel perforation, dissection, thrombosis, distal embolization, vasospasm, and hemorrhage. Results: All patients including the one that needed additional tPA via the sheath, showed dramatic improvement with near total lysis of clot and restoration of blood flow. No major complications were noted. There was one small common femoral pseudo aneurysm which resolved after manual compression. Conclusion: CDT using the EKOS system is very effective but presents with technical challenges related to catheter kinking over acute bifurcations, insufficient length of treatment zones in long occlusions and placement of the 5.3 Fr catheter tip in very small vessels. In our study we have sought to overcome these challenges using various techniques. Good resolution of clot was obtained even in distal small caliber vessels with minimal complications.

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