



Clinical Research

Clinical Outcome After Extended Endovascular Recanalization in Buerger's Disease in 20 Consecutive Cases

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Background: To present our experience of extended endovascular management for thromboangiitis obliterans (Buerger's disease) patients with critical limb ischemia (CLI).

Methods: Between January 2005 and July 2010, a consecutive series of 17 Buerger's disease patients with CLI in 20 limbs were admitted and the diagnosis confirmed. The mean age of the patients was 41.5 years (standard error: ± 1.7). All patients presented with history of smoking, one patient presented with hypertension, and eight patients presented with dyslipidemia. According to Rutherford classification, all patients were found to be between grades 3 and 5. Ultrasonography first, and angiography examination later, confirmed a severe arterial disease involving almost exclusively below-the-knee and foot arteries in all cases. A new approach for revascularization, defined as extended angioplasty of each tibial and foot artery obstruction, was performed to achieve direct perfusion of at least one foot artery.

Results: An extensive endovascular treatment was intended in all patients with success in 19 of 20 limbs, achieving a technical success in 95%. No mortality or complication related to the procedure was observed. During a mean follow-up of 23 months (standard error: ± 4.05), amputation-free survival with no need of major amputation in any case and sustained clinical improvement was achieved in 16 of the 19 limbs (84.2%) successfully treated, resulting in a 100% limb salvage rate (19/19).

Conclusion: In this first experience, in patients with thromboangiitis obliterans, extended endovascular intervention was a feasible and effective revascularization procedure in case of CLI. High technical success, amputation-free survival, and sustained clinical improvement rates were achieved at midterm follow-up was achieved.

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INTRODUCTION

Thromboangiitis obliterans (TAO), widely known as Buerger's disease, typically occurs in young people and smokers, with onset of symptoms before the age of 40 to 45 years and men being most commonly affected. Clinical presentation usually begins with ischemia of the distal small arteries and veins of legs, arms, feet, and hands, manifested by claudication of the corresponding extremities.¹

As the disease progresses, typically, calf claudication and, eventually, ischemic pain at rest and ischemic ulcerations on the toes, feet, or fingers may develop. Superinfection often occurs, and the lesions progress toward necrosis and distal gangrene. Other manifestations of the disease may