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Editorial Open Access

# Critical Limb Ischemia: The Need for a Multidisciplinary Treatment Approach to Care

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## Editorial

The prevention, diagnosis and treatment of peripheral artery disease, PAD, has been and remains an important clinical challenge for the international medical community [1]. Lower extremity peripheral artery disease affects more than 8 million people in the United States and in excess of 202 million people globally with a predicted global increase in the prevalence of peripheral artery disease as atherosclerotic risk factors become more prevalent, the population ages and the treatments for chronic diseases become more sophisticated [2-4]. Critical limb ischemia, CLI, defined as chronic ischemic rest pain, ulcers, or gangrene resulting from objectively diagnosed arterial occlusive disease represents the severest extreme on the peripheral artery diapason.

The past decade has heralded a greater understanding of critical limb ischemia and novel approaches, tools and therapies for the surgical and endovascular revascularization of patients with critical limb ischemia including tibiopedal arterial minimally invasive retrograde revascularization, drug coated balloons, stents (self-expanding, balloon-expandable, and drug-eluting stents), and atherectomy (laser, directional, orbital and rotational atherectomy devices) with increased procedural success. Yet for patients with critical limb ischemia, life is characterized by vicissitudes of morbid sequelae including amputation, disability and death [5-8]. Once the purview of vascular specialists, the timely, accurate diagnosis of critical limb ischemia is now a responsibility that is shared amongst all medicaland surgical specialists and given the multifaceted nature of critical limb ischemia, effective treatment and improved amputation free survival requires an aggressive interdisciplinary approach to care [9,10].

Diabetic foot ulcers occur in up to 25% of diabetic patients and are often caused by an interplay of factors including arterial insufficiency, neuropathy, poor wound healing, infection, pathologic foot structure and abnormal biomechanical factors [11,12]. In 2005, it was estimated that close to 2 million people in the United States had limb loss with that number projected to reach 3.6 million by 2050 [13]. Nearly half of the patients requiring amputation were found to develop critical limb ischemia in the contralateral limb requiring amputation of the contralateral limb within five years [10]. The associated personal, economical and social cost is difficult to assess in standard cost analyses (i.e., quality of life, loss of productivity, home construction and adaptations). The adoption of a multidisciplinary limb salvage team including Podiatry, Interventional Cardiology, Vascular Surgery, Wound Care, Nutrition, Plastic Surgery, and Endocrinology allows for concise, coordinated care of the patient with a diabetic ulcer or critical limb ischemia and the implementation of evidence-based algorithms of care effecting a more than two-fold increase in amputation free survival rate in some centersand is expected to become the standard of care for patients with critical limb ischemia [9,14].

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