

# Clinical Outcomes of Patients with Diabetes Undergoing Lower Limb Angiography: A 1 Year Follow Up Study

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**Background:** Diabetes related foot disease, in particular foot ulcers, remains one of the main complications of the condition - caused by a combination of peripheral neuropathy, infection, and peripheral vascular disease. In England, an estimated 0.6-0.7% of the National Health Service budget is spent on the treatment of diabetic foot ulceration and amputation. The peripheral arterial disease (PAD) presents as either intermittent claudication, or with features of critical ischaemia (CI): rest pain, tissue loss with ulceration and gangrene. The prognosis of patients with a diabetic foot ulcer and PAD is poor, with 50% dying at 5 years, and at 2 years following a major amputation. There has been debate in the literature as to the best way to treat individuals with diabetes presenting with PAD – with conservative management or revascularisation – and what is the best measure of success, limb salvage or improved mobility and independence. Previous work has shown that best medical therapy (wound care with debridement, treatment of infection, off-loading with a 6-week period of observation) for patients with mild PAD and ankle-brachial index  $\geq 0.6$  is an acceptable course of action.

**Aim:** We aimed to examine the clinical outcome of revascularisation versus medical management in patients with claudication and critical ischaemia at our own regional multidisciplinary diabetes foot clinic, as measured by their one year amputation-free survival rate.

**Results:**

**Methods:** We performed a retrospective analysis of all of our patients attending the tertiary specialist diabetes vascular foot clinic with diabetes who underwent an angiogram of the lower limb during the 24 month period from January 2009 to December 2010.

Baseline characteristics	CLAUDICANTS (n=22)		CRITICAL ISCHAEMIA (n=56)	
	No revascularisation (n=8)	Revascularisation (n=14)	No revascularisation (n=30)	Revascularisation (n=26)
<b>Population characteristics</b>				
Age (mean, years)	72.1	75.9	77.9	76.3
Male / Female	6/2	13/1	20/10	12/14
<b>Diabetes</b>				
Type1/Type 2	1/7	0/14	3/27	0/26
<b>Type 2 Management</b>				
Diet	1	2	3	10
Tablet	4	8	8	12
Insulin	2	4	16	4
Mean HbA1c (mmol/mol)	54	62	64	56
Mean eGFR (mL/min/1.73m <sup>2</sup> )	56.6	65.1	58.4	53.8
Previous surgical intervention Y/N	3/5	6/8	13/17	13/13
<b>Risk Factors</b>				
• Stable angina	3	7	12	11
• Previous STEMI/NSTEMI	1	6	9	11
• Previous TIA/stroke	0	4	4	8
• Ex or current smoker	5	8	11	18
<b>Medication</b>				
• Aspirin	8	12	18	17
• Statin	5	12	21	17
• Fibrate	0	0	0	2
• ACE/ARB	6	6	16	14

**Discussion:** In this study, we demonstrate similar amputation outcomes at one year follow up for patients treated with either medical or revascularisation therapy for both presentations of claudication and critical ischaemia, suggesting conservative management of critical ischaemia and claudication is as effective as surgical intervention in terms of limb preservation.

