

20. Subintimal Angioplasty in Femoropopliteal Occlusive Disease

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PURPOSE: The purpose of this study is to assess the short- and midterm outcomes of subintimal angioplasty (SA) in patients requiring revascularization for femoropopliteal occlusive disease.

METHODS: 100 patients (108 limbs) who underwent SA for femoropopliteal occlusive disease by a single physician were included in this study. Clinical presentation according to the Rutherford classification for chronic arterial occlusive disease, ankle-brachial indexes (ABI), pulse volume recordings (PVR), and arterial duplex scans were used to classify and evaluate patients. Lesions were categorized according to TASC classification. Outcomes evaluated included technical success, operative morbidity, relief of symptoms, improvement in ABI, primary patency, re-intervention rate, amputation-free survival, and overall mortality.

RESULTS: Technical success was achieved in 93% (93 patients, 100 limbs) with no major operative morbidity. 33 (35%) patients were Rutherford class 3 and 51 (55%) were class 4/5. 40/100 limbs had TASC C and 60/100 had TASC D lesions. Mean follow-up was 13.7 months (1-49 months). ABIs improved in all having a technically successful procedure, with a median increase of 0.36. Primary patency at 6 and 12 months was 65% and 38%. 26 patients required secondary intervention due to restenosis or reocclusion causing recurrent ischemia, and 15/26 (58%) were active smokers. 19/26 patients underwent successful percutaneous reintervention, six received bypasses, and one underwent below-knee amputation. Overall, 4/93 (4%) patients underwent major limb amputation, three without attempts at reintervention due to distal disease.

No. limbs successfully treated	Technical success (%)	Patency (%)		Mean ABI		1-year		
		6 mos	12 mos	Preop	Postop	Amp rate (%)	Mortality (%)	Amp-free survival (%)
100	93	65	38	0.57	0.89	4	18	75

CONCLUSIONS: Subintimal angioplasty for femoropopliteal occlusive disease is safe with high technical success, minimal morbidity, and acceptable short-term results. Midterm results are less attractive; however, reintervention is often successful. Smoking and long lesions are likely responsible for the high rate of recurrence.