

14. Instent Restenosis (ISR); Endovascular Therapy is a Safe and Effective Treatment Option

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OBJECTIVE: The treatment of peripheral vascular disease (PVD) has dramatically changed with the wide spread use of PTA and stenting. However this is associated with a new complication, instent restenosis (ISR). There are endovascular treatment options for the management of ISR including atherectomy, repeat PTA and cryoplasty. The purpose of this study was to evaluate the long term patency of repeat endovascular intervention for ISR and determine if a specific endovascular intervention is superior.

METHODS: 180 ISR lesions in 118 patients were identified in a prospectively maintained database of lower extremity revascularization between 2004-2008. Indication for re-intervention was claudication and critical limb ischemia (CLI) while treatments included atherectomy, cryoplasty ± stent and angioplasty ± stent at surgeon's discretion. Lesion characteristics including; length and percent stenosis were determined by reviewing the angiograms as well as surgical operative reports. Patients were followed clinically and with vascular labs at regular intervals. Primary, primary assisted and secondary patency were calculated using Kaplan-Meier survival analysis.

RESULTS: Mean age was 72.4±9.9 years and 55.1% were males; comorbidities included HTN (86.4%), DM (55.1%), CAD (51.7%), and smoking (61.9%). Lesion distribution was; SFA 144, POP 17, Tibials 1 and Iliacs 18. Mean follow up was 13.1±12.2 months. Overall, secondary patency was 65% at 24 months (Table 1) 68 (37.8%) lesions needed a second re-intervention and of those 50 (73.5%) were endovascular again. Mean time to re-intervention was 6.1 months. Overall, only 6 (5.1%) patients required a bypass graft and 7 (5.9%) required a major amputation. When compared, the three treatment groups were similar in terms of demographics, lesions and number of claudicants and CLIs. There was no difference in outcomes regardless of endovascular modality used, in terms of patency rates ($p>0.05$). Table 2

CONCLUSION: Our data suggests that repeat endovascular treatment options should be considered first line therapy even for challenging clinical entities such as ISR given the high secondary patency rates. Based upon these data there does not appear to be a modality which is superior and hence the need for a randomized control trial to further investigate the role of each modality.

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	Time (months)	Atherectomy	Cryoplasty	PTA
Primary Patency	12	41.0±6.9	58.7±9.9	47.0±6.9
	24	32.0±7.1	31.3±13.1	38.5±7.2
Primary Assisted Patency	12	66.4±6.8	74.8±8.4	58.9±7.0
	24	57.5±7.6	58.2±12.3	56.2±7.1
Secondary Patency	12	75.3±6.0	78.4±8.0	70.5±6.4
	24	65.6±7.5	60.9±12.5	64.3±7.2

	12 months	24 months
Primary Patency	46.5±4.5	34.9±4.8
Primary Assisted Patency	65.0±4.3	57.6±4.7
Secondary Patency	73.8±3.9	64.5±4.8

NOTES