**THE OUTCOME OF DIFFERENT ENDOVASCULAR REVASCULARIZATION METHODS USED TO TREAT CRITICAL PERIPHERAL ARTERIAL DISEASE**

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Background: Endovascular revascularization (EVR) for peripheral arterial disease (PAD) is becoming a common practice. However, the outcomes of EVR methods are debatable. This study was conducted to compare the outcome of four EVR procedures used for PAD.

Methods: A retrospective observational study performed in a university hospital on patients who were symptomatic, had angiographically proven significant infra inguinal PAD and underwent percutaneuous transcatheter balloon angioplasty (PTA), atherectomy (either Fox Hollow or laser), stenting or combined atherectomy and stenting (A&S). Data were collected from electronic medical records.

Results: From a total of 403 patients with a mean age of 69 +/- 12 years who underwent EVR primary outcomes of PTA, atherectomy, A&S, and stenting only groups are respectively: restenosis 20%, 6%,7%, and 6%; 5 year mortality 16(42%), 60(31.4%), 13(28.8%), and 71(42.2%); immediate complications 10.5%, 4.7%, 6.6%, and 4.7% . When compared to the PTA, the atherectomy and A&S had 40% (p=0.2) and 55% (p=0.2) survival benefit and 80% (p=0.02) and 70% (p=0.16) reduction in restenosis respectively. Survival benefit of the stenting was equal to the PTA but had a 75% (p=0.03) reduction in restenosis.

Conclusions: Our results show that atherectomy, stenting, and their combination can be successfully used as EVR procedures and determine a reduction in restenosis within first year. Atherectomy only or combined with stenting has a survival benefit. The 5 year survival of the stenting group was similar to the PTA only group, possibly because patients with more severe disease underwent stenting.