

**SUBINTIMAL PLACEMENT OF COVERED STENT VERSUS SUBINTIMAL BALLOON ANGIOPLASTY IN THE TREATMENT OF LONG SEGMENT SUPERFICIAL FEMORAL ARTERY OCCLUSION**

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**Background:** Subintimal endovascular intervention has been widely used in the treatment of symptomatic superficial femoral artery (SFA) occlusion. The relative effectiveness of subintimal placement of a covered stent (CS) versus balloon only subintimal angioplasty (SIA) remains uncertain

**Methods:** Retrospective cohort study of consecutive patients with symptomatic long SFA occlusions who underwent subintimal endovascular intervention, either CS or SIA, in a single institution. Luminal patency was the primary outcome. Secondary outcomes included complication and restenosis rates, freedom from re-intervention, and limb salvage rates. Fisher's exact test was used to analyze categorical variables, log-rank test for evaluation of time to event data, and logistic regression to adjust for possible confounding variables.

**Results:** Outcomes were available for 75 patients, 47 in the SIA group and 28 in the CS group. Age, gender, indications for intervention, and comorbid conditions were similar. The mean outflow vessel number was 1.8 vs. 2.0 ( $p=0.45$ ), and treated SFA length 19 vs. 23 cm in the SIA and CS groups respectively. SFA re-occlusion after intervention occurred in 8 (19%) patients in the SIA group vs. 1 (3%) patient in the CS group (log-rank: 4.53,  $p=0.03$ ) during an average follow up of 11 months. Re-intervention rates were 32 vs. 25% ( $p=0.35$ ), limb salvage 90 vs. 100% ( $p=0.09$ ), and need for bypass 13 vs. 0% ( $p=0.05$ ) in the SIA and CS groups respectively. There were no stent fractures in the CS group.

**Conclusion:** Placement of covered stent improves patency after subintimal intervention for long SFA occlusion. Larger studies are necessary to assess the relative efficacy of the two treatment modalities in the management of long segment SFA occlusive disease.