



Early Experience With a Novel Drug Eluting Stent In the Infrapopliteal Circulation: Initial Results

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PURPOSE

- Chronic limb-threatening ischemia, a severe manifestation of PAD, is a rapidly growing global health crisis, with mortality and amputation rates within one year for untreated CLTI both as high as 22%.
- Below the knee (BTK) intervention of CTLI, while particularly challenging, is an area of rapid development, with constant exploration of new techniques and equipment.
- The development of drug eluting stents (DES) has significantly impacted the landscape of endovascular revascularization.
- Initially used for coronary artery stenosis, thin-strut bioresorbable polymer Drug-Eluting Stents (DES) like SYNERGY Everolimus-Eluting Stent (Boston Scientific, Marlborough, MA, USA) have recently become more widely utilized for infrapopliteal disease over the years.
- The purpose of this study is to review the efficacy and potential adverse effects of a novel DES when used to treat infrapopliteal disease.

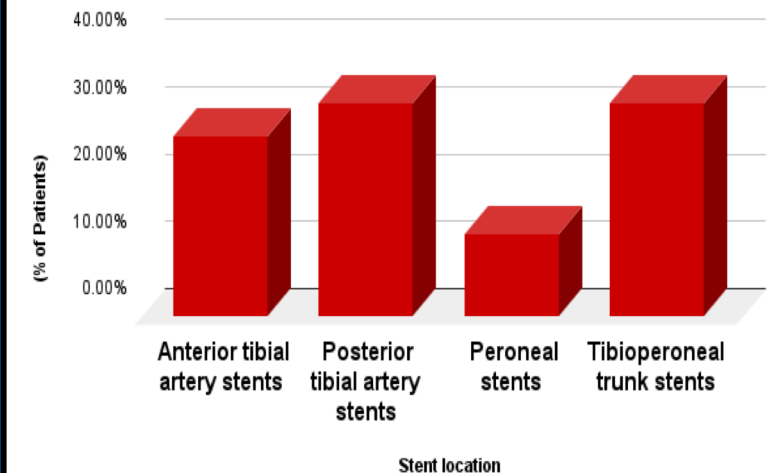
METHODS

- All patients who underwent BTK intervention with placement of at least one SYNERGY stent were identified through our electronic medical record system.
- The data collected includes:
- Age at procedure
- Gender
- Rutherford category
- Target vessel occlusion vs stenosis
- Number of synergy stents placed
- Stent location
- Simultaneous intervention of femoral or popliteal disease
- Occurrence of any major adverse event (i.e. amputation, death, stroke, myocardial infarction (MI)) within 30 days of intervention
- Mortality

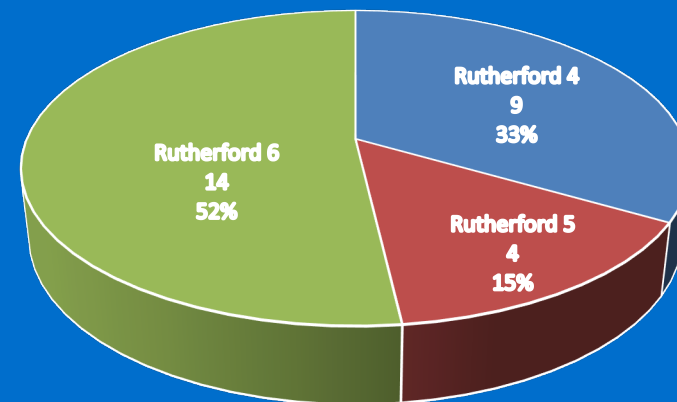
RESULTS

- The mean age at the time of intervention was 70.1 years. There were 12 (44.4%) female patients and 15 (55.6%) male patients.
- A total of 39 stents were placed for 27 patients between 9/15/2021 and 11/14/2022. Rutherford categories included: 9 patients (33.3%) with Rutherford 4, 4 patients (18.5%) with Rutherford 5, 14 patients (51.9%) with Rutherford 6.
- Prior to stent placement, angiography showed target vessel occlusion in 26 arteries (66.7%), and vessel stenosis in 16 arteries (41.0%).
- Stent location included: 9 (23.1%) anterior tibial artery stents, 13 (33.3%) posterior tibial artery stents, 5 (12.8%) peroneal stents, 13 (33.3%) tibioperoneal trunk stents.
- 24 patients (88.9%) had simultaneous femoral or popliteal intervention at the time of SYNERGY stent placement.
- There was a total of 1 major adverse events (3.7%) within 30 days, including: 1 MI. At the time the data was collected, 2 patients (7.4%) have expired > 30 days after intervention.

(% of Patients) vs. Stent location



Rutherford Classification



CONCLUSION

- BTK endovascular intervention is particularly difficult due to the multifocal, densely calcified, and lengthy nature of the disease.
- DES have made groundbreaking differences in the management of infrapopliteal disease.
- The preliminary results in our single center retrospective review elucidate the safety, efficacy, and promising outcomes of this innovative use of SYNERGY stents for infrapopliteal disease.

REFERENCES

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