



CRT-300.18
Outcomes of Stenting With Covered Stents in Aorto-iliac Lesions to Limit Restenosis

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BACKGROUND Advances in endovascular techniques and devices have improved the outcomes of percutaneous revascularization in what was once considered a primarily surgical disease.

The utilization of drug-covered stents (ICAST) appears to yield improved patency rate than the 85% patency rate demonstrated with the use of bare metal stents (BMS) across TASC A, B, C, and D lesions.

METHODS This is a single center prospective trial consisting of patients who underwent aorto-iliac interventions for de novo lesions or ISR (in-stent restenosis) using BMS or ICAST. The patients received routine clinic visits to assess for claudication and an annual vascular ultrasound of the iliac arteries to evaluate for restenosis. The study consisted of 28 limbs with BMS and 26 limbs with ICAST. The study subjects were followed over 3 years. We compared the number of re-intervention, time to re-intervention and number of crossover to ICAST to determine patency rates.

RESULTS Out of the 28 limbs with BMS, there were 8 ISR compared to only 2 IRS of the 26 limbs in the ICAST arm. There were 6 limbs in the BMS arm that crossed over to the ICAST arm after a period of 1 month to 12 years with a mean duration of five years. There was 1 case in the BMS arm that underwent percutaneous transluminal angioplasty without stenting, 7 years from original stent deployment. There was another case in the BMS arm with ISR after 6 months who did not undergo any intervention. On the other hand, there was one case of thrombosis in the ICAST arm after 2 months of stent deployment that required re-do with a BMS. There has been one re-do case of ICAST using another ICAST after 2.5 years.

CONCLUSION This study showed a trend toward improved patency rate with ICAST. There were four times more ISR with BMS when compared to ICAST. Although our result demonstrates improved patency with ICAST, a large randomized study is needed to validate our findings.

CRT-300.19
Angiography in Renal Impaired Patients, An Alternative Technique Utilizing CO₂ and Contrast Mini Doses

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BACKGROUND Prevalence of peripheral arterial occlusive disease, among patients with renal failure, is higher than the general population. Angiography is part of those patients workup. Contrast induced nephropathy (CIN) is a major concern in peripheral angiography. Prevention of CIN is of importance among these patients.

Albeit ample evidence support the use of carbon dioxide (CO₂) as alternative to contrast medium, Actual utilization rates of this technique are low.

We describe a series of cases in which a combination of CO₂ with minimal amount of diluted contrast medium were used for lower extremity angiography.

METHODS Eligible PAOD patients with renal failure, (creatinine >2.5 mg/dl or estimated GFR (eGFR) below 30 ml/min/1.73m²) were treated by combination of CO₂ and diluted contrast medium. Pre angiography treatment consisted of hydration with 1500 ml of 0.9% saline and 1200mg of N-Acetyl Cysteine. Antegrade puncture, of the ipsilateral femoral artery, was used in all cases. CO₂ was used for the

femoro-popliteal segment. The infrageniculate arteries were selectively imaged using diluted contrast medium (2 ml of Iomeron 300mOsm diluted with 6 ml of 0.9 % saline) via a catheter placed in the BK popliteal location (Cook KMP 65cm catheter). Pre and post procedure, Doppler examination, were evaluated.

RESULTS Four patients (50-67 years old), underwent peripheral angiography. Three patients underwent diagnostic and interventional procedures. All 3 patients, underwent infrageniculate percutaneous transluminal angioplasty (PTA), 2 of them underwent femoropopliteal segment PTA, as well. Stent was used in one patient, above and below knee segments, and in one just for the femoropopliteal segment. A median amount of 19ml contrast medium (Iomeron 300mOsm) was used.

ABI increase >25% post treatment was documented in all patients. One patient underwent a diagnostic procedure due to long SFA occlusion. A total amount of 12 ml Iomeron 300mOsm was administered. No adverse effects were noted during and following the procedure.

CONCLUSION PAOD patients with chronic renal failure can be effectively treated by endovascular approach combining CO₂ and minimal amounts of contrast medium. This simple and feasible technique may be used to preserve renal function in patients with advanced CKD undergoing peripheral endovascular procedures.

CRT-300.20
Predictors of Endovascular Revascularization for Critical Limb Ischemia

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BACKGROUND Endovascular treatment is being increasingly performed for patients with critical limb ischemia (CLI). We sought to determine the predictors of endovascular (Endo) versus surgical (Bypass) revascularization in patients with CLI.

METHODS This is a retrospective analysis of 174 CLI patients who were evaluated by a multidisciplinary team from 2011 to 2015 at a large, urban academic medical center and underwent lower extremity revascularization. One hundred thirteen patients (65%) underwent Endo and 61 patients (35%) underwent Bypass. Data collected included demographics, risk factors, Rutherford class and procedural and surgical details.

RESULTS Mean ± SD age of the Endo and Bypass Groups was 65±11 and 59±11 years, respectively, (p=0.004). Diabetes mellitus (DM) was more prevalent in the Endo compared to the Bypass group, 78% vs 54%, p=0.001. Smoking was more prevalent in the Bypass compared to the Endo group, 39% vs 20%, p=0.007. Prior bypass was more common in the Bypass group. Below the knee (BTK) disease was more common in the Endo compared to the Bypass group, 47% vs 10%, p<0.0001.

Univariate predictors to undergo Endo included age >65 years (OR 2.5, 95% CI: 1.2-5.2, p=0.01), DM (OR 2.9, 95% CI: 1.5-5.7, p=0.002), advanced Rutherford classes 5/6 (OR 2.5, 95% CI: 1.2-4.8, p=0.007) and BTK disease (OR 8.2, 95% CI: 3.2-20.6, p<0.0001). On multivariate analysis, age >65 years (OR 2, 95% CI: 1-4.3, p=0.05) and BTK disease (OR 2.8, 95% CI: 1.2-6.3, p=0.02) were significant predictors of Endo; prior surgical bypass was less associated with Endo (OR 0.3, 95% CI: 0.1-0.8, p=0.02).

CONCLUSION In this contemporary series of CLI patients undergoing revascularization, older age, diabetes mellitus, advanced Rutherford Class and below the knee disease were more prevalent in patients receiving endovascular therapy. Independent predictors of endovascular revascularization were age >65 years and below the knee disease.

CRT-300.21
Carotid Artery Stenting is Safe and Effective in High Risk Patients

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BACKGROUND Carotid artery stenting (CAS), compared with carotid endarterectomy, has been a controversial therapy for carotid artery stenosis. CAS may be the treatment of choice for certain high-risk patient subsets. The aim of the study is to demonstrate the safety and effectiveness of CAS in high risk patients compared to non-high risk patients.