Comparing Patency and Salvage Rates between Multiple Ipsilateral Iliac Artery Stents and Isolated Iliac Artery Stents: Beyond Transatlantic Inter-Society Consensus (TASC) D

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Objectives: Endovascular stents are accepted therapy for TransAtlantic Inter-Society Consensus (TASC) A, B, and some C lesions. Surgery is the recommended therapy for patients with TASC D lesions, including those with both ipsilateral common iliac artery (CIA) and external iliac artery (EIA) stenoses/occlusion. This study compares anatomic patency and operative salvage rates for combined ipsilateral CIA and EIA stenting (TASC D) vs CIA or EIA stents alone (TASC A, B, or C).

Methods: All patients (n = 588) who underwent iliac artery stenting at two institutions between 1998 and 2010 were identified. Patient comorbidities and outcomes were retrospectively reviewed and analyses were performed using multivariate regression and Kaplan-Meier methods.

Results: There were 436 extremities with CIA stents, 195 with EIA stents, and 157 with both CIA and EIA stents. There was no significant difference in demographics, comorbidities, or treatment indications between groups. During follow-up, 183 patients died, 95 underwent endovascular reintervention, and 48 required salvage operation. Mean times to follow-up, death, reintervention, and operative salvage were 2.2 ± 0.1, 5.6 ± 0.3, 7.2 ± 0.6, and 9.6 ± 0.5 years, respectively. CIA and EIA stenting in combination was not a predictor of death, reintervention, or salvage operation. Survival, reintervention-free survival, and salvage operation-free survival were similar between those who had CIA or EIA stents alone and those with both CIA and EIA stents (all P > .05).

Conclusions: CIA stents, EIA stents, and the combination of ipsilateral CIA and EIA stents have similar outcomes. Salvage operations for iliac artery stent failure are uncommon and not influenced by the location or extent of iliac artery stent placement. This study suggests that a more aggressive approach with total endovascular management for some TASC D lesions is acceptable. TASC II recommendations for endovascular therapy for aortoiliac disease should be extended to consider selected patients with ipsilateral CIA and EIA stenoses/occlusion.

The Number of Patent Tibial Vessels does not Influence Primary Patency after Nitinol Stenting of the Femoral and Popliteal Arteries

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Objective: Initial TransAtlantic Inter-Society Consensus (TASC) II classification has been shown to influence the patency of stented femoral and popliteal arteries. While several studies have shown the effect of the number of runoff vessels on the durability of infragenicular angioplasty without stenting, the influence of tibial runoff on the patency of primarily stented femoral and popliteal arteries has not been well defined. It is the purpose of this study to determine whether the number of patent tibial vessels affects primary patency after primary stenting of the femoral and popliteal arteries. Overall primary patency was 71% at 12 months, 51.6% at 24 months, and 39.5% at 36 months.

Methods: The medical records of all patients undergoing angioplasty and primary nitinol stenting of the femoral and popliteal arteries by or under the supervision of a single vascular surgeon were reviewed. Results were analyzed by the number of patent tibial vessels documented on perioperative angiography and TASC II classification. Kaplan–Meier survival curves were plotted and differences between groups tested by log-rank method. Fisher’s exact and χ² tests were used to compare categorical factors.

Results: During a 7-year period, 316 limbs in 262 patients underwent primary stenting of the femoral and popliteal arteries. Overall primary patency was 71% at 12 months, 51.6% at 24 months, and 39.5% at 36 months. The number of patent tibial vessels was not a predictor of primary patency.