odds ratio 3.44; 95% CI, 1.66 to 7.16; p < 0.001) increase in immediate complication odds, respectively (Fig. 1). Cox regression analysis revealed that preoperative aspirin was associated with a 37% (adjusted hazard ratio 0.63; 95% CI, 0.40 to 0.99; p = 0.045) reduction in late complications. Immediate (p = 0.21) and late complications (p = 0.51) were not associated with increased mortality.

CONCLUSIONS: Immediate and late IVC filter complications were 1.8% and 3.1%, respectively, and were not associated with increased mortality. Female sex and abnormal anatomy were associated with increased immediate complications. Late complications, including filter thrombosis, might have been reduced with aspirin use and expeditious retrieval.

Open Repair Outperforms Endovascular Repair in the Treatment of Symptomatic Popliteal Artery Aneurysms
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INTRODUCTION: Endovascular and open surgical modalities are currently used to treat popliteal artery aneurysms (PAAs), with limited data on comparative durability of both repairs. We aimed to study the comparative effectiveness of endovascular PAA repair (EPAR) vs open PAA repair (OPAR).

METHODS: The Vascular Quality Initiative was queried for patients with symptomatic PAA who underwent OPAR or EPAR from January 2010 to October 2020. Kaplan-Meier estimates, log rank tests and multivariable logistic and Cox regression were used to study outcomes. Outcomes were 30-day mortality, amputation-free survival and overall survival.

RESULTS: A total of 2,527 patients were studied, of which 74.7% (n = 2,324) were treated with OPAR. Patients treated with OPAR were younger, current smokers, less likely to have coronary artery disease and chronic kidney disease, but more likely to present with acute ischemia. Compared with EPAR, OPAR was associated with decreased odds of 30-day mortality (0.9% vs 1.9%, adjusted odds ratio 0.46; 95% CI, 0.23 to 0.92; p = 0.028), better amputation-free survival (93.9% vs 89.6%; p < 0.001) (Fig. 1), and overall survival (95.0% vs 91.5%; p = 0.001) within 1 year after the index procedure. After multivariable adjustment, OPAR was associated with decreased risk of amputation/death (adjusted hazard ratio, 0.61; 95% CI, 0.44 to 0.84; p = 0.002) and mortality (adjusted hazard ratio, 0.66; 95% CI, 0.46 to 0.94; p = 0.001) in 1 year.

CONCLUSIONS: In this multi-institutional study of symptomatic popliteal aneurysms, OPAR was associated with significantly lower odds of 30-day mortality and better amputation-free survival and overall survival.
Peripheral Vascular Disease and Lower Extremity Amputations: Still a Death Sentence? Statewide Analysis with Long-Term Follow-Up Data

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INTRODUCTION: Historical studies report high mortality associated with below-knee amputations (BKA) and above-knee amputations (AKA) for peripheral vascular disease (PVD). Although 30-day mortality rates have declined, reported 5-year mortality rates remain high at 40% to 83%. We sought to investigate the 5-year mortality in a modern cohort using a statewide database.

METHODS: The California Office of Statewide Planning and Development hospital database was examined from 2007 to 2018. Patients who received an amputation due to complications from PVD were identified using ICD-9-CM diagnosis and procedure codes. Patients who received amputations for trauma were excluded. Subsequent 5-year mortality rates for BKA and AKA were calculated and subanalysis was performed.

RESULTS: There were 26,669 patients identified; 67% had BKA and 33% had AKA. Among this cohort, 70.7% had subsequent admissions. The overall 5-year mortality rate was 18.1%. The 5-year mortality rate was 15.9% for BKA and 22.5% for AKA. This difference in mortality between AKA and BKA was robust to adjustment for age and comorbidities. Mortality risk associated with vascular disease after amputation was 11 times greater than the risk associated with amputation-specific complications.

CONCLUSIONS: Although 5-year mortality for patients undergoing AKA is still higher than a BKA, this study challenges the previous perception of high 5-year mortality after lower extremity amputation related to peripheral vascular disease. We report approximately 50% reduction compared with the historical rates. Further study is warranted to elucidate whether the reduction in mortality is from previously exaggerated rates or recent advances in medical care.

Risk Factors for Bypass Graft Thrombosis at Initial Discharge after Lower Extremity Arterial Bypass

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INTRODUCTION: Early graft thrombosis is one of the most devastating complications of lower extremity arterial bypass (LEB). Understanding the risk factors and rates of early occlusion will help mitigate risks and improve informed decision making.

METHODS: Using the Vascular Quality Initiative, we used multivariable logistic regression to assess risk factors for graft occlusion at discharge after LEB surgery. Backward selection was implemented to identify significant variables associated with occlusion.

RESULTS: From 2003-2020, there were 60,234 LEBs available for analysis. At time of discharge, 56,719 grafts (94.2%) were patent without further intervention, 1,521 (2.5%) required further intervention for a nonthrombotic indication, 1,101 (1.8%) were occluded. Female sex (odds ratio [OR] 1.75; 95% CI, 1.49 to 2.05), American Indian race (OR 2.60; 95% CI, 1.11 to 6.08), multiracial (OR 3.72; 95% CI, 1.65 to 8.40), and preoperative anticoagulation (OR 1.26; 95% CI, 1.06 to 1.50) were associated with increased odds of occlusion. Former smoking (OR 0.76; 95% CI, 0.62 to 0.94), hemoglobin (OR 0.90 per g/dL; 95% CI, 0.87 to 0.94 per g/dL) and preoperative aspirin (OR 0.77; 95% CI, 0.65 to 0.91) were associated with decreased odds of occlusion. As seen in the table, very distal target bypass was associated with a 7- to 8-fold increase in the rate of graft occlusion. Emergent cases for acute ischemia, tissue loss, and rest pain and using a nonautologous conduit carried higher odds of graft occlusion.

CONCLUSIONS: When performing LEB, efforts using native vein can improve early graft patency rates. In addition, targeting individuals with aggressive preventive efforts, such as smoking cessation, antiplatelet therapy, and medical optimization can decrease complications in those needing arterial revascularization.

Sex Differences in Arterial Identity Are Associated with Neointimal Hyperplasia after Carotid Balloon Injury

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