

Comparison of Results of Endovascular Procedures Performed by Different Specialists: Vascular Surgeons Do As Well As Other Interventionalists

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Background

With the rapid proliferation of endovascular procedures across different specialties, the role of vascular surgeons in this competitive environment is still evolving, although comparisons of outcomes between specialties are lacking. The purpose of this study is to compare clinical volume and periprocedural complications between vascular surgeons (VASC), interventional radiologists (IR), and cardiologists (CARD) for endovascular procedures performed at a single academic center.

Method

All patients undergoing percutaneous balloon angioplasty or stent procedures for occlusive disease in defined anatomic locations (aortoiliac, lower extremity, renal, and subclavian arteries) between January 1, 2001, and December 31, 2003, were identified from a prospective multispecialty quality assurance vascular database. Clinical volume, indications, technical details, procedure complexity, periprocedural complications and mortality (within 30 days) were reviewed. Comparisons between each of the specialties were made using chi-square analysis.

Results

During the 3-year period, 352 procedures were performed in 222 patients (VASC 206 procedures [58.5%], IR 97 procedures [27.6%], CARD 49 procedures [13.9%]). Balloon angioplasty or stenting occurred in 170 iliac, 68 lower extremity, 96 renal, and 18 subclavian arteries. The overall periprocedural complication rate was 13.4% (VASC 10.7%, IR 15.5%, CARD 20.4% [p = NS]), and included access site hematoma (5.1%), renal insufficiency (1.7%), arterial dissection (1.4%), stent mis-deployment (1.1%), cardiac problems (1.1%), vessel thrombosis (0.9%), pulmonary problems (0.6%), access site pseudoaneurysm (0.3%), arterial perforation (0.3%), and other (1.1%). Thirty-day mortality was 1.7%, with only one death related to periprocedural morbidity.

Conclusion

Percutaneous endovascular procedures performed for occlusive disease by vascular surgeons can be performed safely and effectively compared with those by other specialties within the same institution, with a trend toward lower periprocedural complication rates that is inversely related to increased clinical volume.