More evidence that lower extremity bypass may be a poor choice for claudicants who smoke


CHICAGO, Illinois, September 2018 – New research in the Journal of Vascular Surgery reports that even though smokers who undergo lower extremity bypass for claudication are healthier and around eight years younger than nonsmokers, their surgical outcomes are less successful.

“These data further add to the evidence that active smoking leads to diminished bypass graft patency, specifically in claudicants in whom the decision to pursue revascularization does not equate with limb salvage,” said lead author Dr. Douglas Jones. “The decision to pursue revascularization, however, remains controversial and highly dependent on the severity of symptoms and the implementation of medical therapy, including smoking cessation counseling.”

Given the elective nature of intervening among claudicants, some practitioners have a strict nonoperative policy toward smokers due to inferior surgical outcomes, the article authors stated, whereas others will proceed with surgical bypass irrespective of smoking status and medical therapeutic options if the patient is anatomically suited.

As reported in the September 2018 edition of the JVS, researchers from Boston Medical Center and Dartmouth-Hitchcock Medical Center, led by Dr. Jones and Dr. David Stone, aimed to determine the effects of active smoking on perioperative outcomes and long-term patency after lower extremity bypass for claudication. They evaluated 1,789 bypass procedures registered in the Vascular Study Group of New England database between 2003 and 2016. Of these, 54% (971) were nonsmokers and 46% (818) were smokers.

Their study found that, compared to nonsmokers, smokers were:
• Younger (60 versus 68 years old)
• Less likely to have multiple comorbidities (e.g., hypertension, coronary artery disease, congestive heart disease, diabetes, renal failure)
• More often offered bypass to the above-knee popliteal artery (52% versus 43%)

Interestingly, peri-operative outcomes in smokers revealed that they have a lower incidence of cardiac events (2.4% versus 5.3%) and comparable respiratory and wound complication, as well as mortality.
Importantly, long-term outcomes revealed that smokers have lower primary (43% versus 58%) and primary-assisted (54% versus 71%) 2-year patency, and lower 10-year survival (69% versus 76%).

The benefits of smoking cessation prior to surgical procedures has been well documented, particularly for vascular procedures. However, most studies have involved a mixed population, including patients with both critical limb ischemia and claudication. Few studies have focused specifically on claudicants, in whom the revascularization decision can be made electively and carefully.

The report suggests that surgeons should consider active smoking status an important risk factor for decreased long-term graft patency when counseling patients about options.

The article will be available online through Oct. 31, 2018 at vsweb.org/LEB-smoking.

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