VDM Vascular Disease Management

INTERVIEW

Perioperative Events Following Open vs Endovascular Revascularization for CLTI: An NSQIP Analysis

An Interview With Waseem Wahood, MD, MS

Keywords
chronic limb-threatening ischemia

June 2024
ISSN 2152-4343

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VASCULAR DISEASE MANAGEMENT 2024;21(6):E48-E49

At the 2024 SIR Meeting in Salt Lake City, Utah, Waseem Wahood, MD, MS, from HCA Florida Aventura Hospital, Aventura, Florida, presented results from a study that analyzed 30-day perioperative outcomes from the National Surgical Quality Improvement Project (NSQIP) in patients who received intervention for chronic limb-threatening ischemia (CLTI). *Vascular Disease Management* spoke with Dr. Wahood about his study and what the results could mean for patients with CLTI.

Dr. Wahood, what was the purpose of your study?

We wanted to look at the differences between the endovascular and surgical procedures for CLTI in light of recent trials that have been coming out, such the BEST-CLI trial and BASIL-2, which were very hot topics in the past year or so.

What database was utilized for the analysis?

We used the NSQIP database, which is based on the American College of Surgeons. The database includes vascular targeted procedural data files, which give us more granular data such as the type of procedure, the arteries involved, and information such as ankle- brachial index and several CLTI-specific outcomes.

How were the patient cohorts categorized based on the type of intervention received?

We looked at data from 2013 to 2019, which is roughly when the two trials occurred. We categorized the patients into three categories: those who underwent open surgical bypass using the greater saphenous vein; those who underwent open surgical bypass as well, but with an alternative conduit, whether that's prosthetic, spliced, or any sort of conduit besides the greater saphenous vein; and those who received angioplasty, stenting, or atherectomy.

What were the key findings regarding the 30-day perioperative outcomes for patients undergoing endovascular intervention compared to surgical bypass with the saphenous vein?

What we saw was that the outcomes of the trials kind of emulated that in our database. So looking at major amputation, we saw that the endovascular group had a higher rate of major amputations than those who underwent open bypass. They also had a higher rate of major amputations and adverse limb events, but the endovascular group had a lower rate of major adverse cardiovascular events (MACE). Then when we compared the endovascular group to the open surgical bypass with a different conduit, all the outcomes were similar except for MACE, which was lower for the endovascular group.

What implications do the findings of this study have for clinical practice regarding the selection of revascularization strategies for patients with CLTI?

The cohort we collected from this database is a little bit different than the cohorts that were presented in the trials. What we're trying to highlight is that the trial results, when implementing them to clinical practice, we need to contextualize the results in terms of adequate and very specific patient selection. That's what we do.

This database implements random sampling and data input is through manual chart reviewing, so it sort of gives us an idea of what's happening in other practices outside of the centers that participated in the clinical trials. So it may or may not be more representative of practice in America than the randomized study, but it gives us a snapshot.

What were the limitations of the study, and how might they affect the interpretations of the results?

One of the major limitations is that this database only has 30-day outcomes, so we couldn't look at the 1-year outcomes similar to the clinical trials.

What is the one takeaway that you wanted the audience to get from this study?

The major takeaway is that when we look at the trial results, we ask ourselves, how does that impact our clinical practice? We need to contextualize those results; does it work for the patient population that we're helping? For example, we saw that the NSQIP database had more minority representation vs what the trials showed, and there were also more patients who were smokers in the NSQIP database vs the BEST-CLI trial and BASIL-2 trials, and other comorbidities as well. There are differences in whether each community had less representation in the national database vs more representation in other studies. ■