

INTERVIEW

New Tools for Eliminating Venous Obstruction and Valvular Reflux

An Interview With Kush Desai, MD

Keywords

[venous obstruction](#)

[valvular reflux](#)

[Thrombectomy](#)

June 2024

ISSN 2152-4343

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VASCULAR DISEASE MANAGEMENT 2024;21(6):E50-E51

At the 2024 SIR Meeting in Salt Lake City, Utah, interventional radiologist Kush Desai, MD, from Northwestern University in Chicago, Illinois, presented several sessions, including “New Tools for Eliminating Venous Obstruction and Valvular Reflux.” *Vascular Disease Management* spoke with Dr. Desai about his presentation and the latest devices available to treat these conditions.

Dr. Desai, tell us about the presentation you gave at SIR.

In this talk, I discussed what's coming, what's forward-facing. There's clear recognition that we have issues in the treatment of deep venous obstruction, and we've seen rapid growth in thrombectomy and venous stent options. We have multicenter, independently adjudicated data. All that's great, but there are considerable frontiers that remain. Some of them are on the thrombectomy side, so I did talk about upcoming thrombectomy devices that perhaps address things better or differently. Of course, all that remains to be seen.

I also talked about the concept of stent maintenance. What we are finding in the investigational device exemption trials for venous stents is that, particularly in the most challenging subset of patients, post-thrombotics, patency rates long term are not that great. We're not talking about the typical vascular patients who are in their seventh or eighth decade of life; we're talking about people in their second, third, fourth, fifth decade of life. The loss of patency and a permanent

implant at that age is highly problematic. So how do we maintain stents? How do we get better at keeping them open? There are a few devices that are on the way in that regard that can help not only get through the blocked stent, but also debulk the stent.

And finally I talked about what we can do to address inflammation, because we all recognize that venous obstruction is an inherently inflammatory process in that some of it is medical, some of it is procedural. And also reflux, because we know that people who have post-thrombotic syndrome not only have obstruction; they have venous reflux and the valves are destroyed. So is there something we can do to address valvular reflux? That really forces us to change the way we think about everything.

Are there any new devices that you're particularly excited about?

I'm excited about all of them! There are so many different thrombectomy devices. We have the possibility of SonoThrombectomy with SonoVascular. We have the possibility of, and this is by no means exhaustive, Inquis medical's aspiration device, we have the possibility of another aspiration device by Endovascular Engineering. Again, these devices are looking to do things that are faster, cleaner than what we have now, but that will have to be demonstrated. But they're certainly innovative and innovation is always welcome in the thrombectomy space.

The stent maintenance space is near and dear to me because of the amount of post-thrombotic work I do. A purpose-built crossing solution, the Traversa (VeinWay Ltd.) is being shown here at SIR; it helps us get through the blocked stents because it's really difficult. And then once we're through the stent, the long-term option is not to just place another stent or to balloon it open because that collagen buildup recurs. So we need a way to remove it. And there are some implements right now available on the market, but there's a clear need to get better at it.

The Chronus closure device (InterVene, Inc) is one that I think has a tremendous amount of promise in being able to sort of peel that collagen off so you get the stent back to what it was supposed to do. And then of course we have the Bullfrog microinfusion system (Mercator) for dealing with inflammation potentially from an interventional perspective. And then there's enVVenio and their venous valve, which they are looking to democratize how venous valvular reflux or how the presence of reflux can be treated by an endovascular percutaneous placement of a valve.

What is the one takeaway that you wanted the audience to get from your presentation?

The takeaway is stay curious, stay humble. I certainly am, as somebody who does all of this. We haven't figured everything out, and we need to do better for our patients. Our industry partners, startup partners, they all recognize that there's a need for continued innovation in this space. And if you happen to be a venous practitioner, it's a really exciting time. ■