VDM Vascular Disease Management

INTERVIEW

Crossing Techniques and Reentry Procedures for Complex Chronic Iliac Occlusions

An Interview With Yolanda Bryce, MD, RPVI

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At the 2024 SIR Meeting in Salt Lake City, Utah, interventional radiologist Yolanda Bryce, MD, RPVI, from Memorial Sloan Kettering Cancer Center in New York, presented several sessions, including "Crossing Techniques and Reentry Procedures for Complex Chronic Iliac Occlusions." *Vascular Disease Management* spoke with Dr. Bryce about her presentation and how these techniques can lead to successful crossing and reentry.

Dr. Bryce, tell us about your presentation on crossing techniques and reentry procedures.

The subject of this session was dealing with iliac disease. Many trials have come out that say that the patency rate of iliac interventions is really good, and the complication rate is much lower than open surgery. A lot of clinicians are now considering endovascular interventions as the first line of treatment for these patients rather than open surgery. However, there are particular challenges that happen when we're treating iliac disease and when we're dealing with what we call TASC-C or TASC-D lesions, where a lot of the occlusions are extensive and complex and you're often dealing with bulky, calcified plaque. These constitute a challenge in just trying to get past the lesion, which is the first step in being able to treat the lesion with a stent or with intravascular lithotripsy.

The first thing you have to do is just be able to cross the lesion. To do that, there are techniques that you have to be aware of, and that was my contribution to that session—to describe the different techniques in crossing.

What is the first step in a successful crossing?

The number one thing that I highlighted in the presentation is to choose your access well. And I think that will set you up for success or failure. It's a simple concept. I know that there are a lot of fancy devices out there, but honestly the first thing is to make sure you choose your access well. When you're dealing with common iliac artery occlusions, typically your best bet in your access is an ipsilateral approach. You have good pushability, you have a shorter distance to work from, and you don't have to deal with a torturous iliac artery if that's the case. So for an ipsilateral retrograde approach—if you're dealing with an external iliac artery occlusion—typically an up-and-over approach will set you up for success.

Sometimes, however, you may be worried that you will have difficulty crossing the external iliac artery, and in that case an ipsilateral approach is still possible and it can be very effective. You may have to access lower, so even if you think about accessing the proximal superficial femoral artery, it is still a viable option.

Sometimes you're dealing with a common iliac artery occlusion and an external iliac artery occlusion combined; in that case, you should look at what we call the beak, where there's a tapering in the cap. And if the tapering of the cap or the beak is facing upward, then probably an ipsilateral approach retrograde is best. If the beak faces downward, then an up-and-over approach may be best. But it's not always exact. Sometimes you have to try different access.

What else did you discuss to ensure a successful crossing?

The second thing I talked about is having a roadmap to be able to see where you're crossing. Don't try to cross blind. Either access the patent side or, if both sides are occluded, then consider a radial or brachial artery access in order to image so you know where you are and how to reenter without extending a dissection flap. Then I talked about very good catheter and wire technique in a lot of patients, which is effective probably more than 95% of the time. There are some less-common practices that I mentioned, but I didn't dwell on those.

The next very important element that you should have on hand is a reentry device. The most common are the Outback (Cordis) and Pioneer (Phillips) reentry catheters. Pioneer offers the benefit of using Doppler to know where to focus the reentry. These are 2 effective tools so that one, you don't extend the dissection flap past the reconstituted artery, and two, they potentially decrease the procedure time.

Something to remember is to dilate the track before you use the reentry device because otherwise it's hard to spin the device to find where you should reenter without pre-dilating to 4 mm.

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

That preparation is important—planning ahead of time, knowing which access to use, and knowing how you're going to image, so you have your roadmap. Even in very complex situations, you can traverse complex lesions, but it does require planning, good access, and patience, and trying to maneuver through to stay as intraluminal as possible. ■