Successful Outcomes With the GORE VIABAHN Endoprosthesis

Experts share their experience with this device for AV access.

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Dr. Chopra has disclosed that he has served as paid consultant to Covidien; Cardiovascular Systems, Inc.; and W. L. Gore & Associates, Inc.

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Dr. Safa has stated that he has no financial interests to disclose.

Please share with us the impact the GORE VIABAHN Endoprosthesis has on the outcomes for your patients.

Dr. Chopra: The VIABAHN Device has been very effective in long-segment stenosis of the venous outflow. I use the VIABAHN Device as an extension of the graft, rather than placing a bare stent in the elbow joint or across the shoulder. Almost 4 or 5 years ago, I stopped using bare stents altogether in venous outflow. I have patients who have been on dialysis with patent VIABAHN Devices for 6 or 7 years. I have one patient, in fact, in whom we have done a lot of interventions, and he literally has a graft from one wrist up to the cephalic arch right to the subclavian. He's been patent for many years. The VIABAHN Device has been very good for long term outcomes and avoiding surgery.

Dr. Settle: The VIABAHN Device has allowed me to offer a less invasive method for a more complete resolution of access dysfunction secondary to venous outflow problems. This especially applies to situations in which surgical revisions are not possible due to inaccessible lesions and prevents the abandonment of the access. The VIABAHN Device is the best option for revising AV access grafts because I am able to treat only the diseased segment of vein, allowing for greater vein preservation. It creates a more physiologic repair with laminar flow into the outflow vein than would occur with a typical end-to-side surgical revision. In addition, there is a lower morbidity and wound complication rate. I believe it is the best treatment when you have an obvious outflow abnormality with increased pulse pressure on exam but a marginal radiographic stenosis. This minimally invasive approach diminishes the need for anesthesia and decreases the risk of serious metabolic and electrolyte imbalances. In addition, it also comes with higher patient satisfaction due to a decrease in the pain and scarring that come with surgical revisions. The VIABAHN Device is always my first choice for revisions, when technically feasible.

Dr. Safa: The VIABAHN Device has transformed the way I practice vascular surgery in recent years. Ever since it became available for clinical use in the United States, I started implanting it in the SFA. Shortly, thereafter, I started using it for AV access management. In my opinion, when this stent-graft is used appropriately and selectively, it stands to significantly improve outcomes with the least amount of postprocedure morbidity.

What characteristics unique to VIABAHN provide you a distinct advantage over other stent-graft offerings when treating dysfunctional dialysis access grafts?

Dr. Chopra: First, the length is great. It is flexible. It is trackable.

Dr. Safa: The VIABAHN Device is very flexible and has an excellent radial support. Not only does it maintain good patency in resistant occlusive lesions after implantation, it can handle tortuosities, curves, and bends like no other stent-graft. This makes it suitable for lesions across joints and in a curve of a graft. Stent fracture, collapse, and kink are extremely rare and almost nonexistent.

Dr. Settle: The unique characteristics that make the GORE VIABAHN Device my choice of stent-graft for the treatment of dysfunctional dialysis access are its simple deployment mechanism with precise placement; smaller sheath size; flexibility of the stent across joint space with more durability and no stent fracture; and heparin bonding to provide decreased thrombogenic surface.

Can you articulate the value of the GORE VIABAHN Device over BMS in AV graft revisions?

Dr. Chopra: I don't think of the VIABAHN Device as a stent; I think of it as a graft with a little exoskeleton of wires (so technically, they may define it as a stent). I don't see restenosis in the middle of the graft; all the bare stents have progressive restenosis. If a problem develops, it is typically at the edges and easily revised. I am able to keep it patent for a long time.

Dr. Safa: The VIABAHN Device has been shown, without any doubt, to extend the life of a failing AV graft when used instead of balloon angioplasty alone at the venous anastomosis. In my experience, I have also noticed that the patency of AV grafts can be extended by using VIABAHN Devices instead of BMS. On long-term follow-up, recurrent occlusive lesions seem to develop more rapidly and in a more diffuse fashion in a BMS patient as compared to a VIABAHN Device patient. A recurrent lesion in a VIABAHN Device tends to be more focal and much easier to manage and deal with.

At what point in your treatment algorithm do you implant a GORE VIABAHN Device rather than continued PTA revisions? Why?

Dr. Chopra: Sometimes, even if I get good technical results, I still look for clinical success, which is getting a thrill. Often, I will wait a good 5 or 7 minutes, sometimes even 10 minutes, to see if there is a rebound. I will do an angioplasty, and if there is any doubt of irregularity, I will place a VIABAHN Device, because it costs more to bring the patient back later—not just in terms of dollars, but also for the patient, both in terms of diminishing health due to missing dialysis and the overall cost of the additional revision. You must see what works for the patient. I will do a declot and obtain the angiogram. If I see a stenosis, I perform angioplasty and test to see if there is clinical success. If there is a great thrill, and I have waited 10 minutes, the patient doesn't need a device. If there is any doubt or some irregularity, I cover it with the device. I can keep that open for a long time.

Dr. Settle: I think the 2006 KDOQI guidelines stated that if the same lesion requires angioplasty within a 3-month period, then a surgical revision was indicated. Treatment with a VIABAHN Endoprosthesis is now an appropriate substitution and a good place to start. If I see a patient with a quick recurrence or thrombosis in the same lesion within a 30-day period, I believe these lesions should also be treated with a stent-graft. In addition, any lesion that does not give a satisfactory result, either radiographically or on physical examination, should be treated.

Dr. Safa: After an over 7-year experience with the VIABAHN Device in the AV access field, I have come to realize that it should be the first choice in the management of occlusive lesions at the venous anastomosis of an AV graft. This would provide much better patency and freedom from reinterventions over a 6 to 12 month period when compared to other treatment modalities. ■