Hello and welcome to the July 2020 edition of *Vascular Disease Management*. This issue has many articles of great clinical importance worthy of commentary. I have chosen to comment on “Clinical Pearls for Management of Postoperative Deep Vein Arterialization Patients Following Lower Extremity Minor Amputation: A Case Series” by podiatrists Michael Brown and Guy Pupp. I have chosen to comment on this article as deep vein arterialization (DVA) has shown great promise in the treatment of critical limb ischemia where direct arterial revascularization has failed. DVA has shown great promise particularly in “no option” patients with extensive diffuse severe obstruction of all of the foot arch vessels and their branches.

DVA was initially performed as open surgical bypass to one of the patent paired infra-popliteal veins (most commonly the posterior tibial vein) coupled with valvulotomy within the venous segment following confirmation of a patent venous arch to achieve capillary retro-perfusion. The procedure is now often performed percutaneously with percutaneous creation of an AV fistula in the proximal tibial vessels coupled with covered nitinol stents and disruption of venous valves. This has been extensively studied with the “Lim-flow” series of devices including a forward cutting valvulotome, proprietary covered stents, and an arterial ultrasound device to direct percutaneous AV fistula creation. Excellent rates of limb salvage have been reported with this product. Many cases have been performed recently with improvised systems utilizing commercially available re-entry tools for fistula creation and commercially available covered self-expanding stents. Gandini has reported limb salvage success with distal posterior tibial AV fistula creation without stent implantation. Interestingly once wound healing has been achieved many patients continue to have clinical benefit even if the DVA patency fails. It has been postulated that this may be secondary to angiogenesis.

Establishing flow is a very important first step in limb salvage; however, many of these patients have gangrenous changes that necessitate urgent partial foot or toe amputations and the wounds from these procedures must heal. DVA patients are often older and have a high incidence of diabetes. These patients typically require ongoing anti-platelet therapies for 2-3 months to allow graft maturation. Concomitant foot infection may be present. Significant post-DVA edema may hinder wound healing and increase wound drainage.

In this article Dr. Brown and Dr. Pupp describe techniques utilized to allow complete wound healing and limb salvage as well as pain relief following partial foot amputations in a sizeable series of patients who had undergone DVA. As is typical in all limb salvage cases, wound healing and infection control is crucial to ensure success. Deep venous arterialization procedures pose unique wound healing issues. As more of these procedures are performed we must understand how to address the problems commonly encountered in these patients.

This article underscores the need for dedicated “limb-salvage” teams in centers performing limb salvage surgery and interventions. I encourage anyone performing DVA procedures to read this article and to share your unique experiences in establishing limb salvage utilizing DVA.