A Referral Guide for Your Patients with Diabetic Foot Ulcer (DFU)

Condition
Diabetes currently affects over 382 million people and is one of the leading causes of chronic disease and limb loss worldwide. Every year, over one million people with diabetes lose a lower limb; 80% of diabetes-related lower limb amputations are preceded by a Diabetic Foot Ulcer (DFU).

A foot ulcer is a break of the skin of the foot to at least the level of the dermis that may result from trauma, neuropathy, ischemia and/or infection.

The progression from ulcer to amputation lends itself to several key points in time during which intervention and coordination of care between foot/wound care specialists and vascular surgeons, relying upon evidence-based guidelines, can prevent major limb amputation.

Vascular surgeons are your partners in DFU care and amputation prevention.

When to Refer
Patients with diabetic foot ulcer or infection should have foot perfusion measured by ABI, ankle and pedal Doppler arterial waveforms, and either toe systolic pressure or transcutaneous oxygen pressure. If ischemia is detected, prompt referral to a vascular surgeon is recommended for ischemia assessment, WIfI (Wound, Ischemia, foot Infection) staging and appropriate recommendations for limb salvage options.

Why Refer to a Vascular Surgeon
Vascular surgeons are experts in the assessment of perfusion, interpretation of perfusion and anatomic imaging studies, minimally invasive endovascular therapy, and open surgical bypass for limb salvage. A functional patient's limb should not be considered unsuitable for revascularization without review of adequate quality imaging studies and clinical evaluation by a qualified vascular specialist.

Vascular Surgery is a unique discipline among the American Board of Medical Specialties with specific training requirements to study the natural history and multiple medical treatments of DFU. Vascular surgeons are the only specialists who can perform all therapies to improve blood flow (medical, minimally invasive, endovascular, and open surgery) for DFU. A vascular surgeon can be your partner to help you and your patients get the most comprehensive management of their vascular disorder as well as the treatment that is best for them. Early referral and collaboration with a vascular surgeon can lead to better outcomes for each patient.
Coordination of care to offload the foot, drain infection, and identify ischemia with timely revascularization, when needed, requires early involvement of the vascular surgeon in the care of patients with DFU and CLTI. The Society for Vascular Surgery (SVS) and the American Podiatric Medical Association (APMA) recommend the following guidelines for patients with diabetic foot ulcers:

**Prevention of diabetic foot ulcer**
- Recommendation 1: We recommend that patients with diabetes undergo annual interval foot inspections by physicians (MD, DO, DPM) or advanced practice providers with training in foot care.

**Off-loading DFUs**
- Recommendation 1: In patients with plantar DFU, we recommend offloading with a total contact cast (TCC) or irremovable fixed ankle walking boot.

**Wound care for DFUs**
- Recommendation 1: We recommend frequent evaluation at 1- to 4-week intervals with measurements of diabetic foot wounds to monitor reduction of wound size and healing progress.

**Peripheral arterial disease (PAD) and the DFU**
- Recommendation 2: We recommend patients with DFU have pedal perfusion assessed by ABI, ankle and pedal Doppler arterial waveforms, and either toe systolic pressure or transcutaneous oxygen pressure (TcPO$_2$).
- Recommendation 3: In patients with DFU who have PAD, we recommend revascularization by either surgical bypass or endovascular therapy.
  - Prediction of patients most likely to require and to benefit from revascularization should be based on the Society for Vascular Surgery WIfI lower extremity threatened limb classification.
  - A combination of clinical judgment and careful interpretation of objective assessments of perfusion along with consideration of the wound and infection extent is required to select patients appropriately for revascularization.
  - The choice of intervention depends on the degree of ischemia, the extent of arterial disease, the extent of the wound, the presence or absence of infection, and the available expertise.
  - Repeat limb staging should be performed after surgical drainage, debridement, minor amputations, or correction of inflow disease and before the next major treatment decision to ensure that perfusion is adequate for healing.

*The Society for Vascular Surgery Practice Guidelines on the Care of Patients with Diabetic Foot Ulcer: http://dx.doi.org/10.1016/j.jvs.2015.10.003*

For more Society for Vascular Surgery guidelines for Diabetic Foot Ulcer, visit www.vsweb.org/DFU