

This Little Piggy Went to Market and Didn't Come Home (due to diabetes)

ABSTRACT

A summarized guideline was composed to provide guidance to LTC (long term care) facilities for preventing and treating DFU (diabetic foot ulcers).

With an estimated 17 million cases of diabetes in the US alone, 13% of DFU result in amputation, and diabetes being a contributing factor to 85% of all lower extremity amputations prevention is a key factor for limb salvage.

This guideline addresses interventions, topical treatment options, reviews nutritional support, supportive medications, and special considerations specific to LTC involving an interdisciplinary team approach including the physicians, nurses, therapist, registered dietitians, etc. It provides LTC staff with a quick reference tool to review with the resident's physicians for complete comprehensive care. It is vital that these residents have proper foot wear and glucose control.

Treatment of DFU can be challenging as often diabetes is not the only contributing factor, but they often have circulatory decline as well. New topical treatments are emerging with promising results. HBO (hyperbaric oxygen) therapy although effective may not be ideal for a LTC resident due to behavioral/noncompliance issues, limited transportation availability, and cost constraints.

Pain management of neuropathic origin can also be a challenge due to residents having several disease processes and already on a variety of meds.

This one page summarized guide uses a team approach to optimize the care for the residents.

Diabetic Neuropathic Foot Ulcer Guideline

Diabetic Neuropathic Foot Ulcers (DFU): Must have a diagnosis of diabetes mellitus and peripheral neuropathy. Characteristically on the foot over the metatarsal heads or over the top of the toes caused by neuropathic and small blood vessel complications of diabetes.

Clinical Manifestations/Characteristics: Altered pressure points/sites of painless trauma/repetitive stress. Usually located under distal toes (heels, inter-digital, metatarsal heads, and foot dorsal and plantar), or the inter-phalangeal joints. Wound base is usually pink/pale or with necrotic tissue present. Edges are well defined. Eschar/es are usually small to moderate amounts. Wound shape is usually round or oblong. Surrounding skin is noted with trophic changes, fissuring, or callus formation.

Goal: prevent further trauma, and prevent secondary infection

Interventions

- Reduction of shear stress and offloading of neuropathic wounds (heel rest, off-loading dressings, orthopedic shoes)
- Physical therapy assessment can review the use of assistive devices to provide support, balance, and additional off-loading
- Appropriate foot wear can be provided via Certified Orthotic Specialist or with the use of commercial diabetic shoes
- Review glucose/glycemic control. Review HGBA1C and evaluate effectiveness of treatment modality
- Aggressive prevention/treatment of infection (debridement of unstable tissues/callus or necrotic tissue, pharmacologic when appropriate)
 - May need to obtain plain film x-rays and TMR Soft Tissue as indicated if osteomyelitis or infection is suspected. MRI may be indicated.
- Vascular Assessment/Treatment if consistent with overall goal of care (e.g. revascularization if ischemic, obtain ABI if no pedal pulse present, TCPO2, etc)

Topical Treatment

- Debridement of eschar that is separating, draining, or if no wound infection is present/suspected. Eschar that is dry and stable is NOT debrided.
- Antibiotic or advance of wound care products should be utilized with caution of rotating products q 2-6 weeks if no response (e.g. silver, collagen, hypoxylon, gauze, etc.)
- Review need for off-loading dressing application/devices on ambulating or for patients who will propel wheelchair.
- Advanced therapies can be reviewed with a Wound Care Consultant if no response to topical treatments is noted.

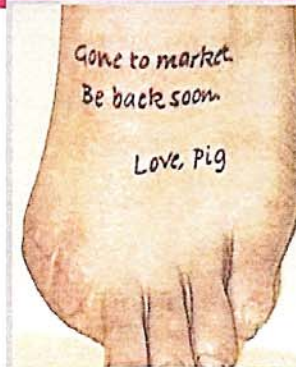
Nutritional Support: refer to the RD for evaluation of wound healing needs and need for supplementation (e.g. MV with Minerals, Vitamin C, Drotein, etc.)

Medications

- Review need for pain medications routine or PRN as dressing change. Review pre-assessment of neuropathic origin and assess need for medication (e.g. Gabapentin (Neurontin) or Pregabalin (Lyrica))
- Physician will evaluate the need for platelet inhibitors, ASA, lipid lowering medications and/or use of ACE inhibitors or Vasodilators, Nicotin, Vitamin B6, Agarose

Special Considerations

- Review foot wear for diabetic patients ambulatory or will wheelchair propelling
- Not all calluses should be debrided or treated until unstable
- Recommend nail care provided by podiatrist as needed



References

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- Snyder, R., et al (2010). Consensus Recommendations On Advancing The Standard of Care for Treating Neuropathic Foot Ulcers in Patients with Diabetes. Supplement to April 2010 Wounds.
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ADDITIONAL RESOURCES

