

Key Session 8

[O83] DIAGNOSING DIABETIC FOOT OSTEOMYELITIS: CONTENTIOUS OR CONSENSUS?

Benjamin A. Lipsky¹

¹University of Oxford, Infectious Diseases, Oxford, United Kingdom

Among patients presenting with a diabetic foot wound many with a mild infection and the majority of those with a severe infection have underlying bone involvement. As infectious bone involvement of the diabetic foot increases the risk for and duration of hospitalization, prolonged (especially parenteral) antibiotic therapy and lower extremity amputation, diagnosing diabetic foot osteomyelitis (DFO) is important. Making the diagnosis depends first on considering it, then proceeding through a series of steps to document whether or not DFO it is present.

The process should begin with clinical examination. Clinicians should consider the possibility of DFO in any diabetic patient with a long-standing or a large or deep foot wound. On examination, the presence in a wound of visible bone, a positive “probe-to-bone” test, or a “sausage toe” suggests DFO. Among laboratory tests or biomarkers, a markedly elevated erythrocyte sedimentation rate (especially if >70 mm/hour) is most useful. Imaging is appropriate for all diabetic foot wounds, and should begin with plain x-rays. As radiography is insensitive in the first few weeks of infection, they should either be repeated in about two weeks, or the patient should undergo an advanced imaging test. Among nuclear medicine tests leukocyte scans (optimally combined with a bone scan) are the most sensitive. Currently, magnetic resonance imaging is the best advanced imaging test for seeking both bone and soft tissue infection, but newer methods (e.g., SPECT/CT, PET/CT) may emerge as more useful.

The criterion standard for diagnosing DFO remains examination of a bone specimen, obtained either at surgery or percutaneously, for histopathology and culture. Of note, false-positive and false-negative results can occur, especially in patients who have been recently treated with antibiotic therapy. In the past decade several guideline groups have offered helpful approaches for diagnosing DFO