

# The Challenge of Diagnosing, Treating Charcot Joint

One of the most important challenges in managing patients with diabetes is the early diagnosis and treatment of Charcot joint because many physicians are unfamiliar with the condition. Despite a plethora of case reports and numerous published theories in pathology mechanics and chemistry, there remains a substantial population of physicians who are unaware of those at risk for this condition.



Molly Judge, DPM: 'There is not a lot of hard evidence as to how and why this may evolve.'

Molly Judge, DPM, director of research and publications for CHP—Healthspan physician group—Cleveland Clinic Foundation, discussed those challenges in her presentation, "The Science Behind Charcot Joint and Use of Nuclear Medicine Imaging to Differentiate Infection from Acute Charcot Breakdown."

"People lean toward the anecdotal when it comes to managing the Charcot joint, and that is because there is not a lot of hard evidence as to how and why this may evolve," she said. "Even in the current literature there is far more reported via case reports and, essentially, in their summary is almost always an anecdotal comment or suggestion regarding management."

Charcot joint is the progressive degen-

eration of a weightbearing joint that can be recognized and arrested at "stage zero." However the lack of widespread awareness of this condition often results in delayed or even missed diagnoses, which increases morbidity and mortality associated with this condition. Part of the problem is that the condition is not well understood and so is likely to be underreported. That means that even the speculated incidence or prevalence for the condition is probably estimated lower than it actually occurs, Dr. Judge said.

For those who are aware of the condition of neuroarthropathy, also known as Charcot joint, the condition often presents as a profound single-limb swelling, warmth, and history of trivial trauma, if any. The challenge for physicians is differentiating Charcot joint from infection. Podiatric physicians can play a role in improving knowledge of the condition by participating in group discussions with colleagues and other practitioners who may be unaware of this condition, she said.

Dr. Judge discussed a profile of a patient with Charcot joint, but said that treatment strategies should be focused on conservative management when possible.

"Ultimately, the people who have done the most surgery for Charcot joint and have tracked their own long-term follow-up are saying, 'If you can avoid surgery on these people, do it,' because their morbidity and mortality is important."

"The most important element in treating the Charcot joint is awareness of those people at increased risk for neuroarthropathy and early identification of the acute process. To identify these people early and prevent them from needing surgery is perhaps the greatest power of modern-day podiatric medicine. That is the pathway to saving lives one limb at a time."

## Nuclear Medicine Imaging

Nuclear medicine imaging (NMI) is a unique, useful modality that can help differentiate between serious infections and more benign conditions. Dr. Judge

discussed its use in "Basic Principles in Practice for Imaging in the Face of Acute and Chronic Infections With and Without Ulceration."

NMI tracks a radioactive agent to identify infection or inflammation in the body, and Dr. Judge used a series of images to demonstrate the modality and how it can be used in diagnosis. A "routine bone scan" is not an agent used to diagnose infection. It is used to identify regions of inflammation that may be associated with infection. In cases where an infection is suspected, a positive bone scan indicates that infection cannot be ruled out.

"There are white blood cell imaging agents that can identify infection in people who have had previous surgery or who have had previous ulcerations and infection," she said. "These are complicated

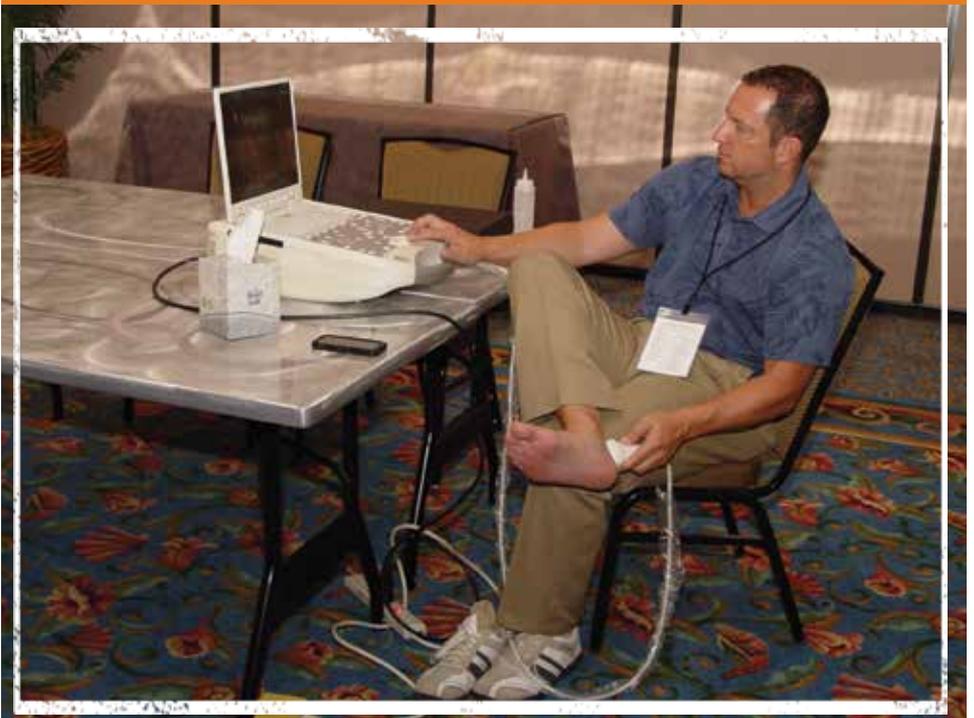
conditions that usually throw off MRIs, and so we look for alternative imaging, such as NMI, to resolve these special cases.

"Nuclear medicine imaging using labeled white blood cells can provide insight and allow the differentiation between infected ulcerations, osteomyelitis, and other more benign conditions."

A detailed history and a thorough clinical exam supplemented by streamlined imaging are important, and Dr. Judge explained when to use which agents and how to order imaging.

"Nuclear medicine imaging is the go-to imaging modality in the complex cases where a patient has had previous surgery, a history of chronic or repeatedly infected ulcerations, or when suffering from the degenerative changes of neuroarthropathy," she said. \*

## Ultrasound Workshop



Glenn Kleezens, regional sales manager for Universal Imaging, tests an ultrasound machine yesterday during the 'Hands-On Ultrasound Workshop.' The annual workshop is designed to teach podiatrists to use the equipment for diagnosis and treatment in their offices.

## Question of the Day

**Q:** *What have you learned during the meeting that you can put to use in your practice?*



"The osteomyelitis lecture Thursday stands out. You had everybody saying you are supposed to use antibiotics for six to eight weeks, and he suggested that two

weeks is perfectly adequate."  
Howard Weinstein, DPM, Carrollton, TX



"I liked Dr. Bakotic's advice to biopsy early if suspicious. If you have a suspicious lesion, find out early what it is."

Peter John Sardella, DPM, Providence, RI



"The diabetes session Thursday was interesting. What I picked up was to push operating to reduce the foot pressure. It is not very common in Australia to do that; we tend to stick to the conservative therapy."

Tran T. Luc, Kew, VIC, Australia



"The use of embryonic tissue in wound care. My practice is at the VA, so we will take that back and discuss it further."

Glenn S. Gold Jr., DPM, Bountiful, UT