

Description

One of MCW's distinguished ACP teaching physicians has developed a model that allows medical trainees to practice neuropathic foot ulcer debridement on a lifelike simulator. The model is comprised of a permanent base shaped as the plantar foot surface along with a replaceable callous ulcer cartridge that is highly realistic and can be cut and trimmed.

Problem Solved

Neuropathic foot wounds, consisting of a dense callous with a deep ulcer, are common among diabetic patients. However, **there are currently no simulation models for teaching foot wound debridement**, leading to a significant lack of experience among wound care professionals. This novel foot model provides a highly realistic and multi-use tool for debridement education. The replaceable callous cartridge is specifically designed with multiple layers, beginning with a hard callous layer and giving way to softer layers as the trainee approaches viable tissue.

Application

The foot training model would be an effective tool for use in education of healthcare students as well as continuing education settings for active practitioners.



Figure: Prototype of training foot model. The plantar foot surface (left) serves as a permanent base for the replaceable callous inserts (right). Cross section (bottom right) shows multiple layers with variable hardness and colors (*i.e.* callous layer is tan, and soft tissue layer is red).

Key Advantages

- Realistic texture and response to cutting
- Differentially layered hardness mimics callous complexity
- Easily replaceable callous cartridges

Stage of Development:
Working Prototype

Intellectual Property Status:
PCT Application Filed
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