The Impact of utilizing Total Contact Casting on Chronic Wounds of the Foot: Less than 60 Days to Total Healing

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BACKGROUND AND PURPOSE
The aging population and prevalence of multiple co-morbidities complicate the care of patients with chronic wounds of varying etiologies including diabetic foot ulcers, pressure ulcers, and wounds related to trauma. Chronic wounds of the foot frequently fail to move through the reparative process in an orderly, timely fashion. Additionally, it is known that diabetic foot ulcers affect 2.5 to 10.7% of all diabetics which frequently result in amputations. Off-loading to redistribute pressure is a basic principle in healing chronic wounds of the foot including diabetic and neuropathic foot wounds. Options for off-loading include bed rest, wheelchairs, crutches, surgical shoes, custom sandals, removable cast walkers, felted foam dressings, orthotics, and orthopedic footwear. The Total Contact Cast (TCC) is considered the gold standard for off-loading foot wounds.

METHODS
The patients had multiple co-morbidities and wounds varying in time of existence from 1 month to 8 months. Each patient’s wound was treated with several different types of wound dressings including skin substitutes, silver alginates, foams, silver dressings, and activated collagen. All patients were off-loaded utilizing a new quick and easy form of TCC.

RESULTS
By utilizing the easier and quicker method of TCC it allows the facility to apply TCC within a fifteen minute time frame or less. In evaluating the outcomes it is evident that using TCC has a direct effect on wound healing to include a significant reduction on total days to heal. These 6 patients had an average of 31.5 days to wound healing ranging from as few as 14 days to 57 days. This is significant especially with the variety of co-morbidities, wound age, and over half of the patients were diabetic. Further research is suggested with a larger variance of wound etiologies, more focused wound dressing applications, and evaluating healing times to substantiate observations.

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