A New Electro-Muscular Blood Flow Stimulator Assisting in the Treatment of Severely Infected and Ischemic Diabetic Wound

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Background

When severe infection is complicating an ischemic diabetic wound the chance of amputation is markedly raised. The diminished blood supply is the key factor determining the success of the treatment plan. FlowAid FA-100 is an external, portable, neuro-stimulator that activates the calf muscles, producing a peristaltic wave that mimics the natural muscle pump. The FlowAid device enhances the arterial blood supply in two ways. It activates the muscles, elevating their metabolic demands causing dilatation of the arteries and elevating blood flow. By chronically stimulating the muscles it promotes angiogenesis and formation of natural arterial bypasses. The activating muscles promote the muscle pump action, clearing venous blood and edema and facilitating more arterial inflow.

Purpose

To present the effects of FlowAid FA-100, an external neuromuscular stimulator device, on salvaging severely infected and ischemic diabetic wound.

Methods

The patient was admitted with a necrotic, severely infected and ischemic foot ulcer (ABI 0.35). He was treated with broad spectrum antibiotics, local wound care and the application of the FlowAid FA-100 device on his calf for 1 hour twice daily. Local wound care consisted of moisture holding dressing and repeated surgical debridements.

Results

The infection was resolved and new granulation tissue developed in the wound. The toes were auto-amputated and the leg was saved. The ABI rose to 0.47.

Conclusion

Flowaid FA-100 is a new technology with a potent ability to enhance arterial blood flow in ischemic patients by stimulating the native musculature - vascular systems. It is beneficial as an adjuvant treatment in diabetic patients with arterial or venous vascular insufficiencies.

References