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Title: High Voltage Pulsed Current for Treatment of Diabetic Neuropathy

Purpose: Of the nearly 16 million diabetics in this country, 60% or more will suffer from peripheral neuropathy due to their diabetes, often leading to wounds and amputation. Treatment for this debilitating and painful condition is very limited, consisting mainly of medications for neuromodulation and pain, and more recently, infrared therapy. An electromagnetic therapy using high voltage pulsed current (HVPC) has been suggested to treat diabetic neuropathy.

Methods: Chart review of 57 diabetics with peripheral neuropathy treated over a two year period in an outpatient clinic. Patients were treated with HVPC for 45 minutes once or twice per week. Total number of treatments ranged from 1 to over 40. Other treatments were continued, including medications and, where applicable, wound care.

Results: Nearly 80% (45 of 57) patients had improvement, including less pain, less numbness, improved mobility, wound healing, and normalized nerve conduction testing. In many cases medications were able to be discontinued. Improvements were sustained after completion of treatments without need for further therapy.

Conclusion: High voltage pulsed current as a modality for treatment of diabetic neuropathy has shown very promising results in this preliminary review, and warrants further study.

High Voltage Pulsed Current (HVPC) for Treatment of Diabetic Neuropathy

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Purpose

Of the nearly 16 million diabetics in this country, 60% or more will suffer from peripheral neuropathy due to their diabetes, often leading to wounds and amputation. Treatment for this debilitating and painful condition is very limited, consisting mainly of medications for neuromodulation and pain, and more recently, infrared therapy. An electromagnetic therapy using high voltage pulsed current (HVPC) has been suggested to treat diabetic neuropathy.

Methods

Retrospective chart review of:

57 patients with diabetic peripheral neuropathy

Treated over two year period in outpatient clinic

HVPC 45 minute treatment sessions 1-2 times/week

Total number of treatments ranged from 1 to 42, averaging 8 treatments per patient

All other treatments were continued, including medications and, where applicable, wound care.

Conclusions

High voltage pulsed current (HVPC) as a modality for treatment of diabetic neuropathy has shown very promising results in this preliminary review, and warrants further study.

Results

In a two year period, 57 patients with diabetic peripheral polyneuropathy were treated with HVPC. In this study nearly 80% (45 of 57 patients) showed improvement after an average of 8 treatments per patient. Improvements included:

- less pain
- less numbness
- improved mobility
- wound healing
- normalized nerve conduction

In many cases medications were able to be discontinued or decreased. Improvements were sustained after completion of treatments without need for further therapy.

Case 48 year old former NFL player with diabetes, neuropathy, PAD and wounds. HVPC and wound care resulted in complete healing of all wounds, and regaining ambulatory status in 8 months.



Case Patient receiving therapy to legs and feet for painful diabetic neuropathy.