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REGENERATING NERVES DAMAGED OR DESTROYED BY NEUROPATHY

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Objective

To show that EST/CET regenerates nerves damaged or destroyed by neuropathy

Background

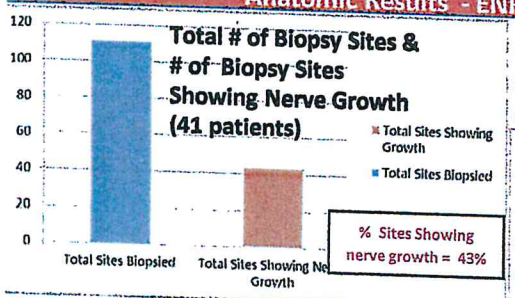
Peripheral Neuropathy (PN) affects millions and has been described as a neurodegenerative disease which impairs regeneration of peripheral nerves. At this time we only treat symptoms with drugs. In the future, clinicians must find ways to regenerate nerves. Concepts called EST (Electronic Signal Treatment) and CET (Combined Electrochemical Treatment) have produced better results in treating painful peripheral neuropathy (PPN) than pharmacology .

We have shown that CET for neuropathy is twice as effective as medication and has essentially no side effects, as compared to at least 38% side effects reported with pregabalin. Patients have been able to eliminate reliance on walking aids. Epidermal nerve fiber density (ENFD) biopsies and A-delta NCS neurodiagnostic testing demonstrate objective proof reflecting the clinical success of CET. A Blue ribbon poster presentation at the American Academy of Pain Management by one of us (PMC) in Sept. 2014 validated the use of CET.

Materials and Methods

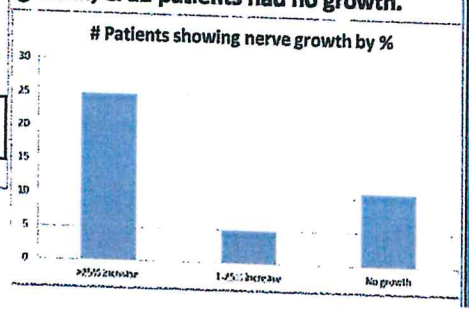
Forty-one adults with clinically documented PPN seen at three different clinics consented to receive an innovative technique called EST/CET. They all received CET/ EST delivered to each extremity twice a week for up to 25 treatments. Their highest numeric rating scale (NRS)during and at the end of treatment were obtained. ENFD biopsies were performed at 2 or 3 different sites before and 3 to 7 months after stopping treatment.

Anatomic Results - ENFD (nerve) growth



Nerve regrowth was shown at 43% of biopsy sites. A majority of patients showed nerve growth at 1 or more sites

Chart below shows that 25 patients had a >25% nerve growth, 5 patients had 1-25% growth, & 11 patients had no growth.



Clinical Results - Symptom Improvement

Table

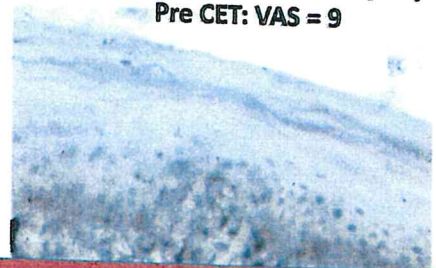
Test	# Pts	Pre CET	Post CET	% Change
VAS	41	7.5 (2-10)	1.9 (0-8)	75%

35 of 41 (85%) of patients reduced their pain by > 50%

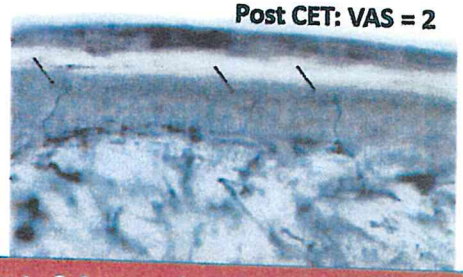
Case Example: 0.0 nerves/mm to 3.4 nerves/mm (normal)

65 year old female with diabetic peripheral neuropathy - 16 CETs in 3 months

Pre CET: VAS = 9



Post CET: VAS = 2



Case Example: 0.0 nerves/mm to 3.4 nerves/mm (normal)

65 y/o male presented with idiopathic peripheral neuropathy – 20 CETs in 6 months

Pre CET: VAS = 9

Post CET: VAS = 2

Conclusions

The anatomic pictures demonstrate that EST/CET regenerates epidermal nerves, improving numbness and possibly decreasing local peripheral deafferentation pain. Millions of patients suffering from neuropathic pain await an effective treatment that allows nerves to regenerate rather than just treating their symptoms. Treatments are virtually risk free. CET is well documented to be effective when used as a non-pharmacologic option to the current treatments of neuropathy, myofascial and central pain syndromes. We can now reclaim the art of medicine by healing, and not just papering over symptoms with drugs.

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