

Case Series : Dextrose The Miracle Cure For Pain ?

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INTRODUCTION:

Superficial perineural injection therapy (SPNIT) is a minimally invasive option for treatment of chronic pain conditions such as peripheral neuropathies, nerve entrapment syndromes, and complex regional pain syndromes.

This case series describes the use of SPNIT in 6 patients with chronic pain conditions.

MATERIALS & METHODS:

500 ml Dextrose 5% was mixed with 0.5ml Sodium Bicarbonate to neutralize its pH. 1.5ml of solution was subcutaneously injected using a 25 gauge hypodermic needle over tender points elicited and along the affected nerve with a positive Tinel’s sign.

RESULTS:

A total of 6 patients with chronic pain conditions were treated with SPNIT. Patients received an average of 3 series of injections over a 4-week period. The results showed significant improvement in all patients after treatment. The average pain score on the Numerical Rating Scale reduced from 7.3 to 1.2. Patients also reported a satisfactory treatment outcome with improved range of motion. Some patients experienced transient increase in pain and tingling during injection. No serious adverse events were reported in any patients.

Patient	Pain Score (Numerical Rating Scale)						
	Pre Injection	Post Injection (Cycles)					
		1st	2nd	3rd	4th	5th	6th
1	7	4	1	-	-	-	-
2	8	4	1	-	-	-	-
3	6	3	3	3	2	2	-
4	8	1	-	-	-	-	-
5	6	4	3	3	1	-	-
6	9	5	3	1	-	-	-

Table 1 : Comparison of Pain Scores Before & After Treatment with SPNIT

DISCUSSION:

SPNIT with dextrose is an alternative treatment option for chronic pain. It involves subcutaneous injection of dextrose around the affected nerve. It is postulated that chronic pain conditions arise from scarring resulting in neural fibrosis, which causes nerve dysfunction. Dextrose is hypothesized to suppress neurogenic inflammation by inhibiting Transient Receptor Potential Vanilloid Receptor-1 (TRPV1) on peripheral nerves, blocking release of neuropeptides triggering the inflammatory cascade. Another putative mechanism is, SPNIT causes hydro-dissection which causes adhesiolysis, alleviating neural fibrosis.

CONCLUSION:

This case series strongly suggests that SPNIT is an effective treatment option for patients with chronic pain conditions who have not respond to conservative treatments. Due to the small sample size, further studies with a larger sample size are needed to fully understand the efficacy of this treatment.

REFERENCES:

- 1.Chen, Si-Ru et al. “Ultrasound-guided perineural injection with dextrose for treatment of radial nerve palsy: A case report.” *Medicine* vol. 97,23 (2018): e10978. doi:10.1097/MD.0000000000010978.
- 2.Wu CH, Boudier-Revéret M. Ultrasound-Guided Steroid Injections for Lateral Antebrachial Cutaneous Nerve Entrapment Within Postsurgical Scar. *Am J Phys Med Rehabil.*2019;98(9):e106. doi:10.1097/PHM.0000000000001150.