Needling Trigger Points

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Needling Trigger Points

- Needling (dry needling or trigger point injection) is a skilled intervention using a thin filiform or hypodermic needle to penetrate the skin and subcutaneous tissues to stimulate fascial tissue, muscle, and myofascial trigger points to manage neuromuscular disorders.

adapted from APTA 2013
Needling Trigger Points

- Needling (dry needling or trigger point injection) is used to diminish persistent peripheral nociceptive input, to restore function, leading to improved activity

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Needling Trigger Points

Needling (dry needling or trigger point injection) by itself is seldom sufficient to restore normal function, but is part of a comprehensive program of rehabilitation and correction of underlying mechanical, medical, and functional disorders.
Osler practiced dry needling in the 1870s.
Sir William Osler and Dry Needling

Mr. Redpath (a wealthy board member of Montreal General Hospital arrived exhausted after mounting the stairs. They proceeded to treat him with acupuncture (for Lumbago), thrusting a long needle into the muscles of the back. At each jab the old gentleman ripped out a string of oaths. He hobbled out no better for his pain. No millions for McGill.

Courtesy of Dr. Robert Woody
Sir William Osler textbook of medicine 1892: For lumbago...acupuncture is the most efficient treatment. Needles 3-4 inches in length (ordinary bonnet needles, sterilized, will do), are thrust into the lumbar muscles at the seat of the pain. courtesy of Dr. Robert Woody
Why Needle?

- Diagnostic
- Treatment
  - to relieve pain
  - to facilitate physical therapy and rehabilitation
What is needled: The most firm or hardest part of the taut band, that is usually also the most tender part.
How do you know you are there? The local twitch response!

Hong, C. Z.; Torigoe, Y. in: Journal of Musculoskeletal Pain, 2(2), 1994, 17-43
When are you done? When there are no more twitch responses.

The trigger point region can be a hornet's nest of trigger points.
Lidocaine injections of trigger points produced significant pain reduction.
Deep dry needling is more effective than superficial needling

Conclusions: Clinical results show that deep stimulation has a better analgesic effect when compared with superficial stimulation.
Deep dry needling reduced pain, improved sleep, and improved mobility
Inactivation of trigger points in the neck and shoulder muscles that referred pain to headache regions reduced local and referred pain, decreased headache days and reduced headache intensity.

The graph shows percentage of patients with significant pain (VAS > 40) at baseline, and at 1, 3, 6 months.
Acupuncture needling versus lidocaine injection of trigger points in myofascial pain syndrome in elderly patients – a randomised trial

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Abstract

Aim To compare the efficacy of acupuncture needling and 0.5% lidocaine injection of trigger points in myofascial pain syndrome of elderly patients.

Methods Thirty-nine participants with myofascial pain syndrome of one or both upper trapezius muscles were randomised to treatment with either acupuncture needling (n=18) or 0.5% lidocaine injection (n=21) at all the trigger points on days 0, 7, and 14, in a single-blinded study. Pain scores, range of neck movement, pressure pain intensity and depression were measured up to four weeks from the first treatment.

Results Local twitch responses were elicited at least once in 94.9% of all subjects. Both groups improved, but there was no significant difference in reduction of pain in the two groups at any time point up to one month. Overall, the range of cervical movement improved in both groups, apart from extension in the acupuncture needling group. Changes in depression showed only trends.

Conclusion There was no significant difference between acupuncture needling and 0.5% lidocaine injection of trigger points for treating myofascial pain syndrome in elderly patients.

Keywords

Acupuncture, lidocaine injection, trigger points, myofascial pain syndrome, elderly patients.

Introduction

Myofascial pain syndrome (MPS) is a common cause of musculoskeletal pain characterised by trigger points (MTPs), that is, tender spots in taut bands of skeletal muscle, limited range of motion in joints, referred pain and local twitch responses (LTRs) during mechanical stimulation of the MTPs.1

Injection of MTPs is essential in managing MPS and several methods have been recommended. The treatments most commonly used for this purpose are dry needling of the MTPs, injection treatments with local anaesthetics or saline, sprays, and stretching. According to the results of several studies, injection continues to be the most effective choice for treatment. The superiority of local injection or dry needling for the inactivation of MTPs is controversial,2 and hollow needles were used for dry needling in these studies.3 Saa suggested that the "hollow needle" induces more tissue injury and is more painful than a "pointed-up needle".4

In this single-blinded randomised trial, we compared the efficacies and adverse events of acupuncture needling and 0.5% lidocaine injection of trigger points in myofascial pain syndrome.

Method

Participants

We obtained retrospective ethical approval from the institutional review board of Inha University Hospital. We selected 40 subjects with chronic MPS of the upper trapezius from volunteers at four community-based facilities; one further subject proved unable to complete the necessary forms. Subjects were selected on the basis of physical examination and interview, and signed informed consent was obtained. Participants were randomised into two groups by coin-toss: 1) ACU (acupuncture needling) group and 2) TPI (trigger point injection with 0.5% lidocaine) group.

Inclusion criteria for the trial were: 1) aged more than 60 years old; 2) complaining of chronic shoulder...
Dry needling compared to sham needling reduced pain (VAS) and improved SF 36 score
Comparison of injection methods in myofascial pain syndrome: a randomized controlled trial.

Ay S1, Evcik D, Tur BS.

Comparison of Dry Needling with Lidocaine injection of Trigger Points
Outcome measures: VAS, cervical ROM, depression.

Significant improvement in pain, ROM, and depression in both groups
Rules of Needling
If you do not know where you are going, don’t go
PLEASE DO NOT GO BEYOND THIS POINT

INTERDICTION DE DÉPASSE CE PANNEAU

BITTE AB WEG DAVON GEHEN

Universal Precautions: Gloves Nitrile, not latex
CAUTION

THIS SIGN HAS SHARP EDGES

DO NOT TOUCH THE EDGES OF THIS SIGN

ALSO, THE BRIDGE IS OUT AHEAD
HIKERS and BIKERS
Move to the side of the road when a vehicle approaches
If you do not know where you are going, don’t go
Patients are treated in supine, prone, or side-lying positions.
Needling: For all Muscles

- Identify landmarks
- Prepare the needle or injection material
- Recheck landmarks every time
Injection Materials

- lidocaine 0.25% (4 cc’s of lidocaine 2% in 30 cc of normal saline)
- Botox
- Nothing else
Medical Waste Disposal
If you do not know where you are going, don’t go.
Complications

- Allergy to nickel, to local anesthetic (epinephrine)
- local soreness
- bleeding
- nerve injury
- syncope
Implants
Pneumothorax
Pregnancy is not a complication
If you do not know where you are going, don’t go