Abstracts:

1 – Myofascial trigger point needling and lignocaine injection in the management of chronic lower back pain: a 6-month audit of treatment in community general practice.

Aim:

To audit management and outcomes of a GP registrar in community practice delivering myofascial trigger point injections with lignocaine to patients presenting for chronic back pain (>3 months duration) to reduce pain and increase mobility.

Background:

There is a paucity of data detailing the effectiveness of needling with lignocaine in the management of chronic lower back pain to decrease pain and increase overall functional mobility. Easy to implement point of care treatments increasing mobility and decreasing pain are useful in the management of chronic back pain.

A Cochrane review has presented data from 35 RCT’s, which involve dry needling and acupuncture, and has deemed them both effective for functional improvement and pain relief in chronic back pain [1]. There have been other low power studies, which have shown benefit in reducing post injection soreness in a lignocaine-needling arm when compared with dry needling [2]. The American Family Physician has published a comprehensive article on identifying and performing anesthetic injection on myofascial trigger points [3] however there is very little data which directly correlate the procedure with benefit in chronic back pain and magnitude in pain reduction and increased range of motion.

Methods:

All patients (n=5) aged between 20-50 years old presenting for chronic low back pain between September 2016-February 2017 who consented for lignocaine needling were assessed at each treatment (n=16) with examination and consultation for baseline pain (scaled from 1-10) and range of motion (ROM) in forward and lateral flexion and rotation. These parameters were immediately compared after 10ml of lignocaine was injected between 20-30 trigger points at volumes of 0.25-0.5ml per injection. Injections were performed on anatomical distributions involving para-spinal muscle groups from T4-S1, gluteal muscle groups as well as Latissimus Dorsi in myofascial trigger points, which displayed a local twitch response.

Results:

In 15 visits (93%) there was a subjective reduction in pain with 4 patients (80%) reporting a reduction from baseline in the magnitude of 4 points on the pain scale (average 7 to 3). This was supported by objective examination findings, which revealed an improvement in baseline ROM in forward flexion at 14 visits (88%) to at least 10 degrees improvement, lateral flexion at 13 visits (81%) to at least 5 degrees improvement and rotation at 13 visits (81%) to at least 5 degrees improvement.

Conclusion:

An audit of 6 months of myofascial lignocaine needling in community general practice showed improvement in 80% of patients presenting with chronic low back pain. This audit is very low power and analysis of a larger patient cohort is warranted to determine magnitude of effect in a dedicated prospective cohort study. There are a number of other research potentials which could be conducted from this pilot audit including lignocaine versus dry needling in chronic lower back pain, novice versus specialist injection and injection followed by intensive massage and rehab compared with isolated injection in chronic pain management.

References:

1 – Furlan AD, van Tulder MW, Cherkin D, Tsukayama H, Lao L, Koes BW, Berman BM. Acupuncture and dry-needling for low back pain. Cochrane Database of Systematic Reviews 2005, Issue 1. Art. No.: CD001351. DOI: 10.1002/14651858.CD001351.pub2

2 – Hong CZ. Lignocaine injection versus dry needling to myofascial trigger point. The importance of the local twitch response. Am J Phys Med Rehabil. 1994, July-August; 73(4): 256-63

3 – D.J Alvarez, P. G Rockwell. Trigger Point: Diagnosis and Management. Am Fam Physician. 2002 Feb 15;65(4):653-661.

In response to the points raised by the panellists in the hopes that it makes my abstract clearer:

1 - No ethics approval as this was an audit of my clinical practice performed retrospectively.

2 - This is a very low power abstract and I hope it gains traction for future formalised research opportunities.

3 - Clinically the effects were 2 weeks before returning to baseline but I had not included this in the audit. Mobility was not formally measured at set end points to determine longevity of effect.

4 - The lower back pain was indiscriminately to thoracic and lumbar regions and all ROM was tested and injections were placed in not one muscular distribution as explained in the abstract

5 - I have made conclusions from the abstract which call for greater research undertakings

6 - I have included some background literature review to support the abstract

7 - I will enlist academics and tertiary institutions for the formal research which I hope will follow.