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**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.**



Background



- **According to BEACH Data**
 - Back Pain is the 9th most common complaint
 - 3 per 100 patient encounters in general practice
- **Primarily a disorder of pain and limitation**
 - Impairment of Function and ROM
- **Economic Burden**
 - 2001
 - ✦ Direct Cost AU 1.02 Billion Dollars
 - ✦ Indirect Cost 8.15 Billion Dollars

Asia Pac J Public Health. 2003;15(2):79-87.

Low back pain in Australian adults: the economic burden.

Walker BF¹, Muller R, Grant WD.

Key Goals



- **Decrease pain**
- **Increase mobility**
- **Facilitate return to normal duties**

Reason for Audit



- **Dry Needling commonplace is physiotherapy treatment**
- **Cochrane review of 35 RCT shows improvement in function and pain in both dry needling and acupuncture for chronic back pain [1]**
 - **More than Sham or No treatment**
- **Low powered studies show non inferior results with lignocaine injection, a reduction in post injection pain [2]**
- **No good data looking at outcomes in lignocaine needling reducing pain and improving ROM**

Methods



- Review of all patients presenting between September 2016 and February 2017 for lignocaine needling
 - N = 5
 - Age distribution 20-50
- Presenting for Chronic (>3 months) back pain
- Assessment of Pain and ROM at each treatment
 - Total treatments = 15
 - Pain and ROM assessed before and immediately after completion of treatment
- Treatment consisted of 20-30 trigger point injections with administration of 0.25-0.5ml of lignocaine without adrenaline per injection
 - Distribution from T6-S1 para-spinal groups, latissimus dorsi and gluteal regions
- Local Twitch response was assessed with each injection

Results



- **Pain reduction**
 - 93% of treatments (15/16 treatments) resulted in pain reduction of AT LEAST 4 points on the pain scale
 - ✦ Median reduction from 7 to 3
- **Range of motion improvement (Goniometre)**
 - Forward Flexion Improvement >10 degrees
 - ✦ 88% (14/16 treatments)
 - Lateral Flexion Improvement >5 degrees
 - ✦ 81% (13/16 treatments)
 - Rotation Improvement >5 degrees
 - ✦ 81% (13/16 treatments)
 - Extension Improvement >5 degrees
 - ✦ 75% (12/16 treatments)

ROM



Average Ranges of Motion for the Spine (in degrees from selected sources)

Joint	Motion	American Acad of Orthopedic Surgeons	Kendall and McCreary	American Medical Assoc
Cervical	Flexion	0-45	0-45	0-60
	Extension	0-45	0-45	0-75
	Lateral Flexion	0-45		0-45
	Rotation	0-60		0-80
Thoracic	Flexion			0-50
	Rotation			0-30
Thoracic/	Flexion	0-80		
Lumbar	Extension	0-25		
	Lateral Flexion	0-35		
	Rotation	0-45		
Lumbo- Sacral	Extension			0-25
	Lateral Flexion			0-25

Discussion



- Pain improved in 80% of patients with chronic lower back pain (4/5)
- Effect was reproducible over 16 treatments
 - Patients returned for 3 treatments on average
- ROM was noticeably improved in 75-88% of encounters across a range of muscle groups

Limitations and Study Potential



- **Very small patient cohort**
 - A larger study over a longer period would assist in determining true effectiveness
- **Lack of comparable data on acceptable improvement in parameters both pain and ROM**
 - Developing a study with acceptable CI for parameters in pain and ROM (others included disability assessment and finger to floor measurement)
- **Results are in isolation of comparison treatment or placebo**
 - Looking at magnitude of effect compared with dry needling and massage alone
- **The magnitude of effect over time and follow-up was not recorded**
 - Reviewing patients to determine the effect over time

Conclusions



- Lignocaine injection was effective in reducing pain and improving ROM in this small audit
- Stronger evidence is needed in a head to head comparison to determine if it is superior or non-inferior to other methods such as dry needling
- It appears to be a simple and easy to implement method to reduce morbidity of a common GP presentation