

PAIN MANAGEMENT IN LUMBAGO: ROLE OF ACUPUNCTURE IN ADDITION TO LOCAL STEROID INFILTRATION AT TRIGGER POINTS

Syed Zahid Hussain Bokhari, Samina Zahid

Pain and Plegia Centre, Dabgari Gardens and
Khyber Girls Medical College, Peshawar – Pakistan

ABSTRACT

Objective: To know the effect of Acupuncture in addition to local steroid infiltration at trigger points in patients of lumbago.

Material and Methods: All patients who reported to Pain and Plegia Centre with lumbago were included in the study. Majority among them gave the history of treatment by various surgeons, orthopedic surgeons and neurosurgeons. Patients with caries spine, ankylosing spondylitis and those who had under gone spinal surgery were excluded. Acupuncture and ancillary techniques were used as primary modality to relieve chronic diffuse pain. Trigger spots were identified by deep palpation and were injected with steroid for complete cure.

Results: Total number of patients studied was 400. Among them 371 (92.75%) cases of low back pain of muscular origin responded well with complete relief of symptoms. In the remaining 29 (7.25%) cases of low back pain with radiological findings of marginal disc prolapse 20 (5%) recovered completely, four (1%) could live with residual symptoms while 5 cases (1.25%) were uncomfortable and were referred for surgery.

Conclusion: Nonspecific chronic low back pain is due to spasm of paravertebral muscles in the lumbosacral region and its primary cause is trigger spots in the muscles. This spasm is effectively relieved by acupuncture form of treatment unmasking trigger spots, which heal to local pinpointed injections of steroids.

Key words: Acupuncture, Lumbago, Trigger Spots, Steroids Injection.

INTRODUCTION

Low back pain (LBP) is a condition that is found in vast majority of population. Most of the organic causes of LBP result in acute pain and these are treatable. Non-specific low back pain lingers on and it finally becomes chronic. Chronic low back pain is usually treated with non-steroidal anti-inflammatory drugs, physiotherapy and also by osteopathic, chiropractic and manual therapies. The results of the treatment in most cases are unsatisfactory.¹⁻³ All remedial measures advocated for treatment of low back pain of non-specific origin are palliative and they only give transient relief. To remain pain free patient have to continue with these measures to spend a manageable life. At times patient compromises and learn to live with this problem. Prolonged ingestion of strong painkillers causes severe side

effects. Low exertion jobs that are static in nature, are an inherent risk factor for low back pain. Persistent pain and varied degrees of disability may cause depressive illness. Psychological morbidity in such cases is a consequence of back pain rather than a contributory factor to the development of the condition.⁴

Low backache is the pain localized below the costal margin and above the inferior gluteal fold, with or without leg pain (sciatica).⁵ About 90% of patients with low back pain will have non specific discomfort which in essence, is the diagnosis based on exclusion of specific pathology.⁵ Low back pain is defined as acute when it persists for less than six weeks, sub acute between six weeks to three months and chronic when it last for longer than three months.⁵ Most patients with back pain will have experienced a

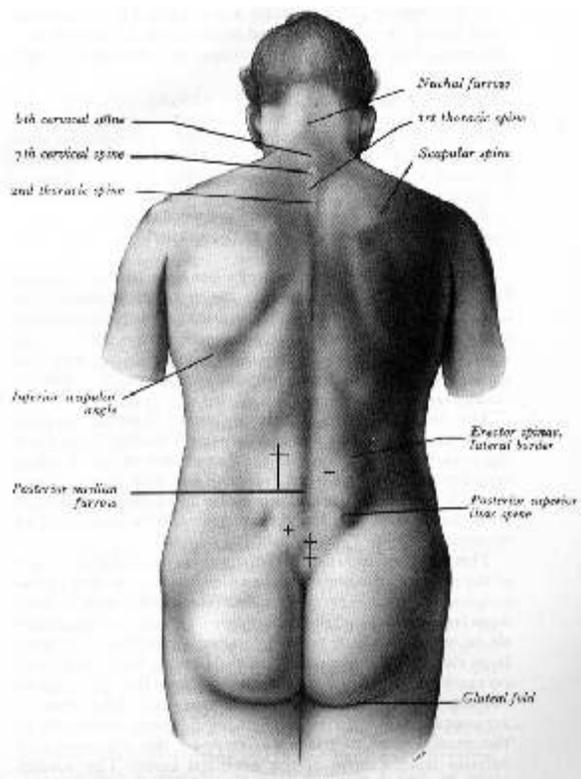


Fig-1. Schematic representation of marking site of lesion in low back pain. The point of maximum tenderness is the point of intersection of vertical and linear marks.

previous episode and acute attacks often occur as exacerbations of chronic low back pain.⁶ An early treatment of lumbago is of special importance as recovery for people who develop chronic low back pain and disability is increasingly less likely, the longer the problem persists.⁵ A number of interventions, including, epidural and sclerosant injections, have not clearly been shown to be effective.⁷ Some evidence exists that spinal manipulation, behavioral treatment, and multidisciplinary treatment (for subacute low back pain) are effective for pain relief.⁵ For most effective treatments, the effects are usually only small and short term.^{2,3,5}

MATERIAL AND METHODS

This study was done on 400 cases of

lumbago at Pain and Plegia Centre, Dabgari Gardens, Peshawar from the year 1999 to 2004.

Patients with muscular pain, sciatica, sacroileitis and border line cases of disc prolapse were included. Cases of caries spine, widespread ankylosing spondilitis and who had undergone spinal surgery were excluded.

Technique

Patients with low back pain were first subjected to acupuncture treatment around Lumbo-sacral region. Acute pain is relieved in 4-6 settings. Treatment is continued for 10 days. Ancillary techniques of acupuncture are used to relieve referred pain in the region. Pain is finally localized in the area of the lesion. This site of pain is then palpated deep by thumb of the right hand, from proximal to distal end to localize the site of lesion and then medial to lateral to exactly pinpoint the site of maximum tenderness. This is the point where linear mark and vertical mark intersect each other (Figure 1). In certain cases more than one lesion are identified. These lesions are then instilled with 40 mg of Triamcinolone acetonide. It is important to ascertain the depth of the lesion for obtaining maximum benefit from steroid injection. To overcome this shortcoming, needle is penetrated deep at the site of lesion and is gradually withdrawn while drug is injected, leaving a streak of the drug along the course of the withdrawing needle at the appropriate depth of the muscle mass. Patient is given rest for 10 days and is reevaluated.

Weakness of back muscles caused by prolonged chronic pain is then relieved by Transcutaneous Electro Neuro Stimulator (TENS) treatment that increases the strength of muscles and improves their tone. Terminals of TENS are placed on either side of lumbar spine about 3 inch away from the midline. High power TENS treatment is given. We use a Chinese version of machine that has three channels in pair. Patient is then advised to report for reassessment if there is any residual feeling of pain within a fortnight. Meanwhile patient is encouraged to take daily walk and is educated to take floor exercises so as to keep the spine elastic and enjoy a lasting relief from lumbago. A single analgesic for 5 days,

TOTAL NO. OF PATIENTS, SEX AND AGE WISE GROUP DISTRIBUTION

Gender	Total No. of Patients (n=400)	Age Group distribution		
		35-45years	45-55years	55-60years
Female	136 (34%)	20	88	28
Male	264 (66%)	27	192	45

Table 1

OUTCOME OF PATIENTS WITH LOW BACK PAIN (LBP) WITH AND WITHOUT MARGINAL DISC PROLAPSE

Outcome	LBP of Muscular Origin (without Disc prolapse) 371 (92.75%)	LBP With Marginal Disc Prolapse 29 (7.25%)	Total (n=400)
Improved	371 (100%)	20 (69%)	391 (97.75%)
Partially Improved	0	4 (13.8%)	4 (1%)
No Improvement	0	5 (17.2%)	5 (1.25%)

Table 2

calcium-Vit D supplement for 20 days, Inj. mecobalamin for five days and 500 mg of mefenamic acid as per requirement are advised at the commencement of the treatment.

RESULTS

Four hundred cases of idiopathic low back pain ranging in age from 35-60 years were treated in this time period. 136 (34%) among them were females while 264 (66%) were males (Table-1). In these cases low back pain of muscular origin in lumbar and sacral region responded extremely well with complete cure. Patients had dramatic relief within days while complete cure was achieved towards the completion of treatment.

Out of 400 cases, 371 (92.75%) cases of low back pain of muscular origin responded well with complete relief of symptoms (Table 2). Cases with marginal disc prolapse (Table-3) advised to avoid surgery responded well. In the remaining 29 (7.25%) cases of low back pain with radiological findings of marginal disc prolapse, 20 (5%) cases (all male patients) recovered completely indicating that cause of pain in back muscles were the trigger spots and not the radiological findings. In rest of nine (2.25%) cases numbness along dermatome

and mild pain in the leg were the residual symptoms, while major complaint of low back pain was completely relieved. Four (1%) patients could live with residual symptoms while 5 cases (1.25%) were not satisfied, as residual symptoms were bothering thus they were referred back for surgery.

DISCUSSION

It has been observed that in clinical practice not much attention is given to the cause of nonspecific low back pain. It is very much possible to identify the origin of pain, label it as specific lesion and then to treat it accordingly⁸. Labeling chronic low back pain as fibromyalgia, myofascial pain syndrome, disc herniation or facet mediated causes of pain may be of academic interest but the concern of the patient about pain is that they want to be free of pain and they want this urgently.⁹ A Psychiatrist reported severe depressive illness with suicidal tendencies in a group of patients suffering from chronic low back pain¹⁰. Such alarming incidence of possible depressive illness leading to suicidal tendencies indicates graveness of an apparently benign condition. As chronic nonspecific low back pain has remained stubborn to all conventional

MOST COMMON SITES OF LESION AND CLINICAL RESPONSE TO TREATMENT IN LOW BACK PAIN

	Most Common Sites	Less Common Sites	Lesions In	Results
LUMBAR REGION	L-3-Sacrum	-	Multifidus, Erector Spinae or Facet Joint Pain	Excellent
	-	L1-3	Lipping of D/L Spine, Multifidus or Erector Spinae	Excellent
SACRAL REGION	Soft tissue at the back of Sacrum	-	Erector Spinae or Multifidus	Excellent
	-	At the Sacroiliac Joint	Lesion is in close vicinity of Sacroiliac Joint	Good
MARGINAL DISC PROLAPSE REPORTED ON RADIOLOGICAL EXAMINATION	Lesions in Strong muscle of para-vertebral region	-	Multifidus, Erector Spinae or facet Joint Pain	Excellent
	-	Irritation of Nerve Root due to disc prolapse	Minimal disc Lesion	Residual Symptoms as Pain and Numbness in leg persist

Table 3

treatments, acupuncture form of treatment has emerged as a new hope towards pain relief. It has been proved to be the most effective tool while being used in a multi-disciplinary approach towards treating pain syndromes.¹¹ In our treatment modality, acupuncture form of treatment, is utilized to localize a diffuse pain. This lesion may be anything from fibromyalgia to facet joint pain. As these lesions can not be pointed out and treated in other modalities and persist in situ thus they cause recurrent problem. We searched for and identified these lesions and marked them. These lesions heal fast to instillation of 40 mg of triamcinolone acetone locally.

Like all the muscular problems cause of diffuse pain in lumbosacral region as well as lumbago-sciatica finally turns out to be lesions in the para-vertebral region. These lesions would mostly be fibrositis, myositis, tendonitis or the facet joint pain (fasciitis). Referred diffuse pain along lower limb in these cases mimicking lumbago-sciatica is not always true sciatica and it gets relieved when its root cause in the lumbosacral region is treated. It has enabled us to differentiate these referred pains from true sciatica that do not succumb completely to this treatment regimen. This referred pain is dull and diffuse while true sciatica is shooting pain along the course of the sciatic nerve along with varied levels of neurological deficits. These lesions are in most of the cases the result of sprain in strong muscles of paravertebral region. And such a history is mostly obtainable in these cases. This treatment regimen has specifically enabled us exact localization of the fasciitis pain without involvement of any sophisticated procedures or advanced radiological examination. Another highly disabling and painful condition commonly termed as Sacro-Ilietis is very effectively treated by this technique. The end results show that the lesion is not in the sacroiliac joint and is thus a misnomer. The pain finally localizes in the soft tissue in the sacral region. Lumbago in cases having marked osteoarthritic changes and lipping in the lumbar vertebra respond well and remain manageable for three to four months when again it require treatment as the organic cause persists. Majority of cases with marginal degree of disc prolapse, read on advanced radiological examinations (CT scan and MRI) respond well to this conservative treatment. It seems that radiological findings in these cases were not the true indicators, of the cause of clinical presentation of symptoms. The same opinion is indicated in another study.⁶ In these cases lumbago seemed to be due to minor lesions like fasciitis/ myositis/ fibrositis and not due to pressure on nerve roots. At the end of treatment any pressure on nerve root reflects itself in the form of residual pain and numbness along

the dermatome corresponding to the nerve root under compression. In majority cases of marginal disc prolapse, patients feel comfortable after this treatment, and they can live with residual neurological deficit and pain if any (minimal disc lesion).

Our study showed excellent results of Acupuncture in addition to local steroid infiltration at trigger points with almost 98% improvement in term of pain relief in patients with LBP. However our sample did not include patients with significant disc prolapse and LBP was mainly of musculoskeletal origin. The use of acupuncture as the management option for chronic pain e.g. low back pain has been increasingly recognized in the west. A British pre-post-comparison attributed a reduction in 86 % of physiotherapy referrals and 51 % of specialist referrals after the introduction of acupuncture.¹² A British randomized controlled trial comparing acupuncture for LBP to standard treatment found acupuncture to be cost effective with regard to pain reduction.¹³ A systematic review has shown that Transcutaneous electrical nerve stimulation appears to reduce pain and improve the range of movement in chronic low back pain subjects. However a definitive randomised controlled study of ALTENS, TENS, placebo/no treatment controls, of sufficient power, is needed to confirm these findings.¹⁴ A systematic review and a meta-analysis corroborate a lack of evidence regarding acupuncture for the treatment of acute LBP. However in chronic LBP acupuncture seems to be a useful adjunct to conventional treatment, although no evidence suggests that acupuncture is more effective than other active therapies.^{15,16} Results of randomised studies of acupuncture for low back pain have been inconclusive due to poor methodological quality and insufficient acupuncture techniques.¹⁷

TENS treatment proves to be highly effective for relieving the effects of sedentary life style that is a major problem of modern living and in majority of cases we think that sedentary living and postural problems are the root cause of low back pain. TENS treatment exhibits around 120 contractions per minute to the erector spinae and other muscles of the lumbosacral region. TENS treatment improves the tone of the back muscles, relieves generalized diffuse pain and gives marked sense of well being to the patient.

CONCLUSION

Chronic non specific low back pain can effectively be treated by identifying and pinpointing the lesions and injecting them with steroids. Acupuncture plays the major role in this treatment regimen.

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Address for Correspondence:

Dr. Syed Zahid Hussain Bokhari
 173-A, The Mall,
 Peshawar Cantt.
 Email: zhbpsh@yahoo.com