



To Study The Efficacy of Lumbar Facetal Joint Injections in Patients with Chronic Non – Radicular Low Back Pain

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ABSTRACT

Background- The prevalence of low back pain & its impact on general health showed that 25% of patients reporting are Grade II - Grade IV low back pain (high pain intensity with disability), & 14% in patients with neck pain. However, every patient needs to be individualized & it is sometimes very difficult for treatment as neither conservative nor surgical treatment provides low back pain relief and definite long-term improvement in few patients. The aim of the study was to study the efficacy of local steroid injection in facetal joint in patients with chronic low back pain.

Method & Materials- This is a prospective study. All the patients attending the Orthopaedics OPD with complain of low back pain which is non – radicular & more than 3 months of duration, earlier treated conservatively but no pain relieved. Sample size was 100 patients. All the cases more than 40 years were included in the study with duration of pain in low back from 3 months. The patients with Oswestry Pain Disability Questionnaire score higher than 20 were included.

Results:- The mean age of the patients was 54.4. The minimum age was 43 and the maximum age was 69 years. Most of the patients were female. Most of the patients with low back pain were labourers followed by housewife, shopkeeper and clerk. The pre – injection VAS score was 6.2 and the mean Oswestry disability index pre- injection was 61%. 80% patients had 50% pain relief post – injection and showed significant clinical and functional outcome on 1st follow – up. Where as 20% patient had significant pain relief post – injection but didn't show significant improvement both clinically and functionally on follow – up. On consecutive weekly follow – up the 60% of the patient had significant improvement. The commonest complication was Post – injection parasthesia post – injection, which eventually disappeared.

KEYWORDS : Lumbar Facetal Joint, Low Back pain, Injections

Introduction: Spine is the most common source of chronic pain¹ and the second most common reason for a patient to consult a physician². About two-thirds of the population suffers from back pain at some point of time during their life span² and this symptom incapacitates 20% of them for long periods (>4 weeks)³. Chronic back pain entails suffering and disability of considerable ergonomic significance, since the majority afflicted by this malaise belongs to the age group of 30–50 years⁴ this implies loss of precious man-hours. The incidence of chronic spine pain is at least 5% annually⁵⁻⁷ with the average prevalence in adults being 15%⁸⁻⁹. Notwithstanding the fact that duration of pain and its chronicity are controversial topics with poor universal consensus on the definition, pain that continues for more than 7–12 weeks despite conservative management is generally accepted as chronic⁴. Traditionally, it has been believed that most episodes of spinal pain will be short-lived and that 90% of patients recover in about six weeks with or without treatment, and hence it is best managed conservatively, with rest, physiotherapy and analgesics/muscle relaxants^{5-6,10-11}. However, several studies have dispelled this belief and shown that chronicity or recurrence of low back pain ranges from 28% to 75%¹²⁻¹⁷

The mechanism of action of steroid and local anesthetic injections administration are still not very well understood. It is believed that the achieved neural blockade alters or interrupts nociceptive input, of the

afferent fibers reflex mechanisms, self-sustaining activity of the neurons, and the pattern of central neuronal activities. Local anesthetics act by interruption of the pain-spasm cycle and nociceptor transmission reverberation. Corticosteroid acts by reducing the inflammation by inhibition of either the synthesis or release of a number of pro-inflammatory mediators and by causing a reversible local anesthetic effect.

METHOD & MATERIAL –

This is a prospective study conducted in Department of Orthopaedics with a sample size of 100 patients. The Aim of this study was to study the efficacy of the local steroid injection in facetal joint in patients presenting with non – radicular chronic low back pain and to evaluate and analyze the clinical and functional outcome on the basis of VAS Score, Oswestry disability index and to evaluate the complications related to the procedure. All the patients attending the outpatient department in Orthopaedics. All the cases with age more than 40 years were included with complain of non – radicular chronic low back pain which is not relieved by conservative measures. Patients with complain of pain with duration more than 3 months. Patients with Oswestry low back pain disability questionnaire score higher than 20 were included. Patients with age less than 40 years, post – traumatic low back pain, infectious pathology, tumours, osseous abnormalities, radicular pain and neurological deficit were

excluded. Patients who have earlier received spinal corticosteroid injection with in last one year and the patients with pregnancy, diabetes mellitus, blood coagulation disorder and allergy to anaesthetics were excluded.

RESULTS: -

The mean age of patients was 54.4 years with minimum being 43 yrs and maximum age being 69 yrs. Females (61 patients) were most common with back pain as compared to males (39 patients). 44 patients had L4 vertebral level pathology, 36 patients had L5 level pathology and 20 patients had L3 level pathology. 52 patients were farm labourer, 26 patients were housewife, 12 patients were shop – keeper, and 10 patients were clerk. The mean pre – injection VAS Score was 6.2, which significantly reduced at consecutive follow – up. The mean Oswestry disability index pre – injection was 61% which also significantly got reduced after significant follow – up. Out of 100 patients 79 patients had significant i.e. more than 60% improvement in clinical and functional outcome at 1st follow – up where as 21 patients had not shown significant improvement. Post – injection. On 2nd follow – up 67 patients had significant clinical and functional improvement and on 3rd follow – up 65 patients had improvement in functional and clinical improvement. There was post – injection parasthesia observed as complication in 7 patients post – injection. No other complication lie allergic reaction, septic arthritis post – injection, neurodeficit was observed.

DISCUSSION:

Image-guided and blind injection procedures are commonly used to diagnose or treat spine-related pain (the facets, sacroiliac joint, exiting nerve root, and the disc). [14] The anesthetic injection, in combination with steroid or either alone, serves as a diagnostic and therapeutic block. Patient’s pain response depends upon the accurately target of the drug in the region from where the pain is generated. Usually, most injection procedures, the short, intermediate and long-term pain relief and response depend upon detailed clinical evaluation (history or physical examination) and also to the confirmatory nature of the pain response to the diagnostic block.

In our study mean age of the patients was 54.4 as compared to study done by T. L. Schulte et al ¹⁸ and they found mean age 55.2 years [range, 29–87 years]

In our study there was female predominance i.e. out of 100 patients 61 patients were females and 39 were males as compare to other studies done by T. L. Schulte et al ¹⁸, out of 39 patients, 21 men (54%), 18 women (46%)

In our study most of the patients were heavy workers (farm workers) as compare to other studies in the literature. In our study there was significant improvement in clinical and functional outcome in 65 % of the patients at 3 weeks of follow up as compare to other studies done by Gorbach et al ¹⁹ on therapeutic efficacy of facet joint blocks and concluded Facet joint blocks appear to have a beneficial medium-term effect in one third of patients with chronic lower back pain and may therefore be a reasonable adjunct to nonoperative treatment.

In a study performed by L. Schulte et al ¹⁸ on an injection therapy of lumbar facet syndrome : a prospective study on 39 patients Found an excellent or good by 62% (24 patients) of the patients after 1 month, by 41% (16 patients) after 3 months, and by 36% (14 patients) after 6 months.

In a study performed by Gorbach C et al ¹⁹ a controlled trial of corticosteroid injections into facet joints for chronic low back pain and found that patients with chronic low back pain who reported immediate pain relief after injections of local anesthetic into the facet joints were randomly assigned to receive fluoroscopic guidance injections of either methyl prednisolone acetate or isotonic saline in the same facet joints. Ninety five patients were followed for six months and their condition assessed with scales of pain severity , back mobility and limitation of function, after one month none of the outcome measures differed clinically or statistically between the 2 study .

Conclusion:

Lumbar Facetal joint injections can be considered as one of the treatment modality for chronic low back pain not responding to conservative measures for short-term pain relief.

Figure Legends –

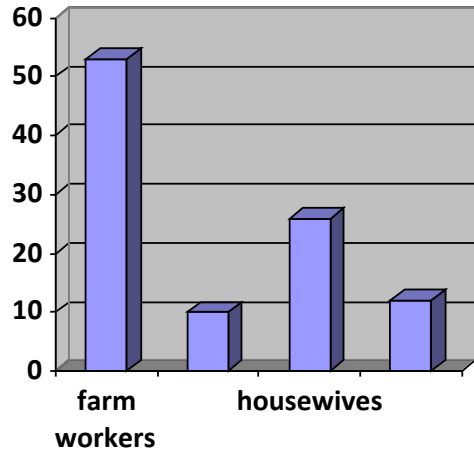


Figure 1 – Occupation of the patients

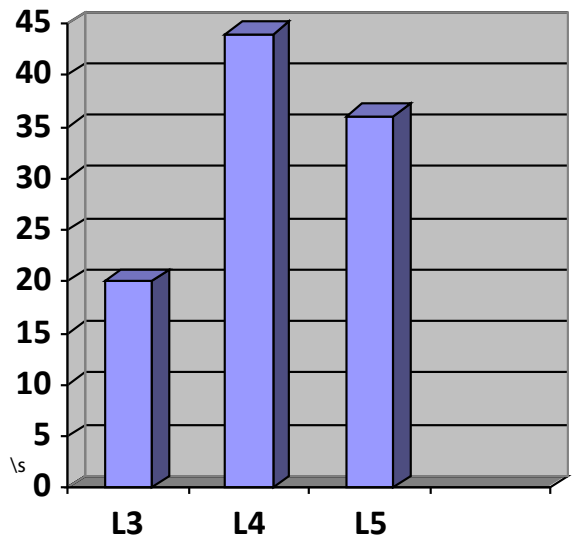


Figure 2 - Patient with the Facetal Level Involvement

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