

## CLINICAL OUTCOME OF LUMBAR FACET JOINTS INJECTION IN PATIENTS WITH FACET JOINTS SYNDROME

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### ABSTRACT

Facet joints or known as zygapophysial joints is one of the common sources of chronic back pain. Facet joint injection with local anaesthesia with steroids is known to have optimistic results with this technique. Therefore, our study aimed to evaluate the efficacy of the treatment response for the patients who were clinically diagnosed with lumbar facet joints syndrome by using Oswestry Disability Index scoring (ODI) and pain score as the standard assessment tool. At the same time, we further look into the correlation between body mass index (BMI) and vitamin D status with the treatment outcome. This is a quasi-experimental one-group time-series study where all patients with a clinical diagnosis of lumbar facet joints syndrome were recruited from August 2018 till December 2019. Statistical analysis of parametric data will be performed by using descriptive analysis. Pearson correlation is used to determine the strength and direction between two continuous data. A paired T-test is used to compare between two-time point for the same patient (i.e., pre and post 6 months of lumbar facet joints injection for ODI percentage score). The inferential analysis will be done using one-way AOVA for the mean difference of ODI percentage score of pre and post 6 months of lumbar facet joints injection. P-value of <0.05 is considered to indicate a statistically significant difference. Further analysis using post-hoc test will be used for the significant result under one-way ANOVA. We have a total of 36 patients to achieve the power of 80%, at 0.05 significance level. Patients' rated outcomes were assessed using Oswestry disability index score (ODI) and pain score showed improvement after the treatment, Pearson correlation test showed that there was statistically significant correlation between these assessment tool (p-value = 0.001). We failed to demonstrate positive correlation between the body mass index (BMI) and the ODI scoring by using One-way ANOVA analysis ( $F(2,33) = 3.003$ , p-value = 0.063). However, we noticed a significant improvement based on ODI scoring for the patients with normal weight. There is a positive correlation between vitamin D status and ODI scoring by using One-way ANOVA analysis ( $F(2,33) = 3.294$ , p-value = 0.049). Dunnett T3 post-hoc test further exploited and revealed that the optimal category of vitamin D patients have shown to have good outcome after the treatment. In conclusion, patient diagnosed with lumbar facet joints syndrome with normal BMI and optimal vitamin D status has a good clinical outcome after lumbar facet joint injection.

**Keywords:** Facet joints syndrome