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### **“Percutaneous Lumbar Decompression Improves Quality of Life in Veterans Suffering from Low Back and Leg Pain”**

**Objectives:** Interspinous process decompression (IPD) is a procedure that restricts lumbar spine extension through implantation of a spacer between adjacent spinous processes to reduce neurogenic claudication symptoms associated with lumbar spinal stenosis (LSS). Our study aims to determine whether a minimally invasive IPD provides relief to United States Military Veterans who have undergone the procedure over the past year. To achieve this, a health survey and a secondary questionnaire will compare pre-operative and post-operative results.

**Methods:** Patients were administered an SF-12v2 survey pre-operatively and at several intervals up to 1-year post-operatively to assess their quality of life over time; there is a score for Mental Component Summary (MCS) and Physical Component Summary (PCS). The patients were then administered a customized secondary questionnaire to specifically monitor their improvement in pain on a scale of 1-10 and their improvement in the number of blocks walked post-operatively. The patients were also questioned on whether they received any post-operative injections, lumbar surgeries, and IPD explants. Opioids taken chronically were measured before and after the procedure; our conversion of hydrocodone to morphine was 1:1, and oxycodone to morphine was 1.5:1. Additionally, the patients were asked whether they would recommend Vertiflex, IPD, to a fellow veteran based on the improvement in their low back and leg pain. 20 patients are currently participating in the study, and 16 patients have been assessed at the 1-year time mark.

**Results:** Of the 16 patients administered the SF-12v2, patients saw an average increase of 6.56 in their MCS score ( $p=0.054$ ,  $p>0.05$ ), while the change recorded in the PCS score was insignificant ( $p>0.05$ ). Regarding the secondary survey, patients had an average decrease of -1.69 in their pain score on the standardized 10-point pain scale ( $p=0.078$ ,  $p>0.05$ ). Additionally, patients saw an average increase of 2.04 city blocks walked post-procedure when measured using the average size of a city block according to the City of New Orleans Department of Public works ( $p=0.087$ ,  $p>0.05$ ). Relief in pain and increase in the number of blocks walked was insignificant thus far in the study. Patients taking opiates before the procedure had an average decrease of -23.09 morphine milliequivalents post-op ( $p=0.024$ ,  $p<0.05$ ). Subsequently, only 7 (43.75%) patients received procedures after IPD, consisting of 1 (14.29%) patient with lumbar spine surgery, 6 (85.71%) of these patients receiving epidural steroid injections, and 0 patients undergoing an IPD explant. Overall, 9 patients would recommend Vertiflex to a fellow veteran, with 11.11% experiencing only back pain relief, 11.11% receiving only leg pain relief, and 77.78% experiencing both back and leg pain relief. 7 patients would not recommend Vertiflex to a fellow veteran because of lack of improvement.

**Conclusion:** Percutaneous lumbar decompression with IPD increases the quality of life in Veterans. A significant decrease in chronic opioid use was seen after IPD. A majority of patients recommend IPD to fellow U.S. Veterans, and there were no complications.