

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

Michael Forte, L2, Casey Murphy, M.D., Randolph Roig, M.D., Carlos Trigo M.D., Thomas Finke M.D.

Introduction

Interspinous process decompression (IPD) is a procedure that limits lumbar spine extension through implantation of a spacer between adjacent spinous processes to mitigate moderate intermittent neurogenic claudication symptoms associated with lumbar spinal stenosis (LSS). Our study aims to determine whether percutaneous IPD provides relief to United States Military Veterans who have undergone the procedure over the past year. To determine 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. 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. The patients were also questioned on whether they received any post-operative injections, lumbar surgeries, and IPD explants. Additionally, the patients were asked whether they would recommend Vertiflex, IPD, to a fellow veteran. 20 patients are currently participating in the study, and 16 patients have been assessed at the 1-year time mark.

Results

Using the SF-12v2, patients saw an average increase of 6.56 in their MCS score ($p > 0.05$), 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 blocks walked post-procedure ($p = 0.087$, $p > 0.05$). 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 Vertiflex, consisting of 1 (14.29%) patient with back surgery, 6 (85.71%) of these patients receiving epidural steroid injections, and 0 patients undergoing a Vertiflex explant.

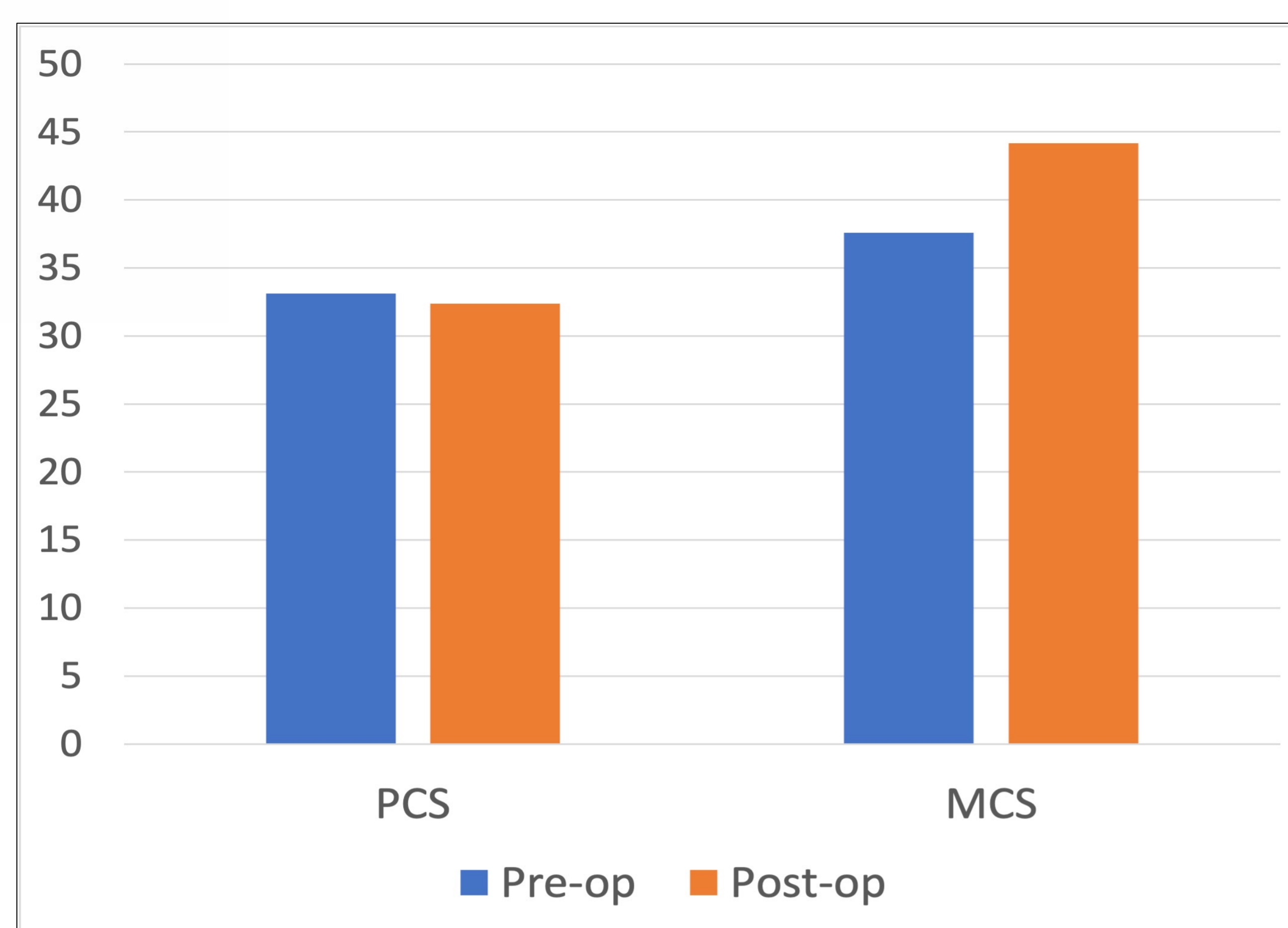
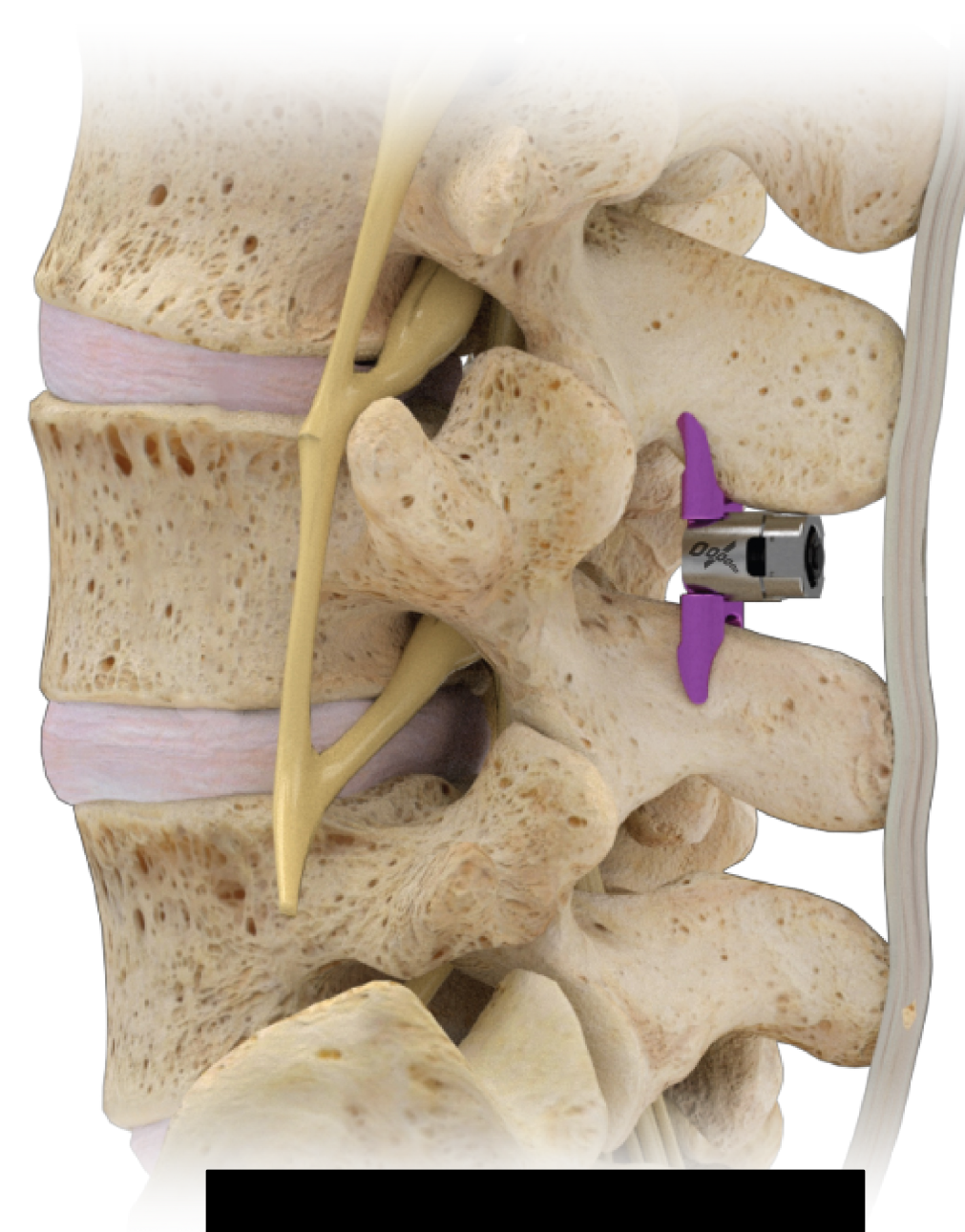


Figure 1: Mean PCS and MCS of patients before their operation and 1-year post-operation (n=16)



Results Continued

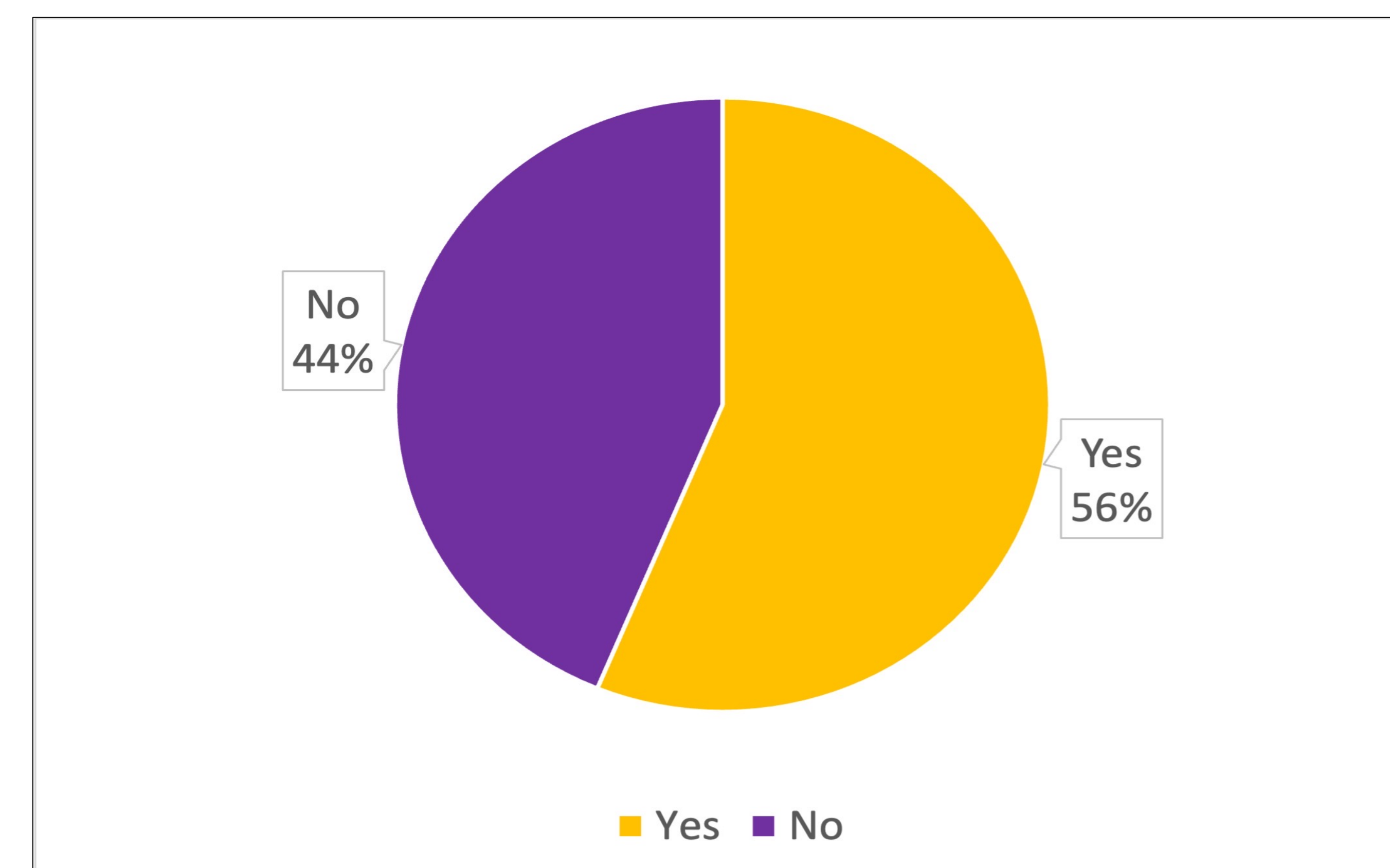


Figure 2: Patients response when asked whether they would recommend Vertiflex to a fellow Veteran (n=16)

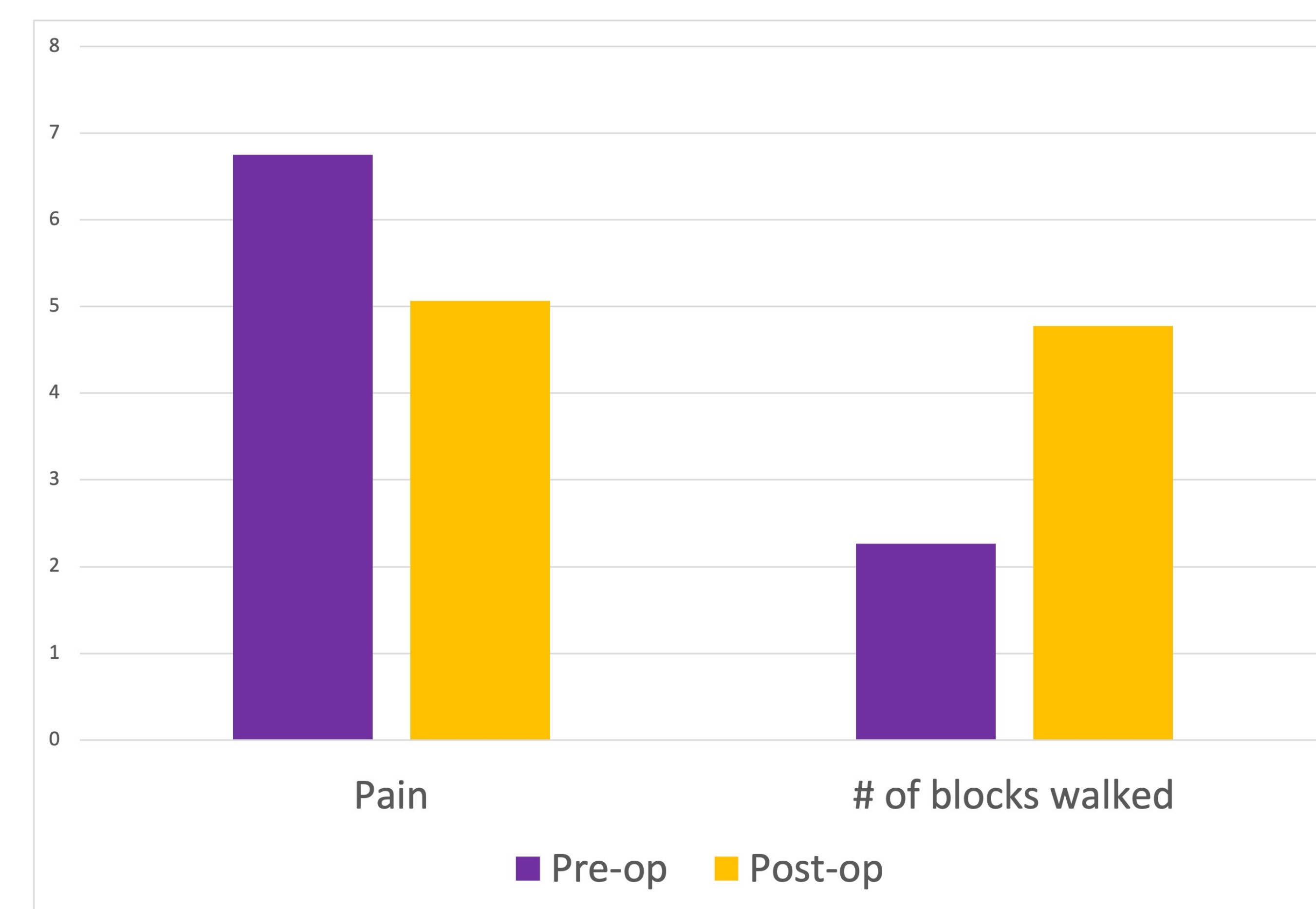


Figure 3: Mean pain score and number of blocks walked without pain before and after Vertiflex procedure (n=16)

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.