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"Vertiflex Outcomes on Lumbar Spinal Stenosis"

Objectives: Interspinous process decompression (IPD) is a procedure that restricts lumbar spine extension through implantation of a spacer between adjacent spinous processes to reduce nerve pinching and leg pain associated with lumbar spinal stenosis (LSS), a type of spinal canal or nerve root narrowing. LSS can manifest as central canal and neuroforaminal stenosis, either independently or simultaneously. Our study seeks to determine how Vertiflex, a minimally invasive IPD, improves pain and functionality in veteran populations showing symptoms of LSS. We will compare preoperative and postoperative results using chart analysis, health surveys, and a secondary questionnaire.
Methods: A sample of veterans at the New Orleans Veteran Affairs Medical Center were each administered a four-question secondary questionnaire over the phone which inquired about their pain and capabilities at or around one year after their Vertiflex surgery to compare with their initial post-operative survey responses. The survey asked about the patient's current level of pain on a scale of 1-10, the number of blocks they are able to walk post-operatively before having to stop due to pain, whether they have received any procedures following the surgery including injections, low-back surgeries, and Vertiflex explants, and why or why not they would recommend Vertiflex to another veteran. The response data was stratified by the types and degrees of LSS, including mild/moderate and severe forms of stenosis. P values of less than 0.05 using a paired t test were derived and considered significant.
Results: In comparing patient responses pre versus post Vertiflex procedure, both patient groups with severe central canal stenosis (n=8) and mild/moderate neuroforaminal stenosis (n=11) were found to have a significant decrease in overall pain levels after their Vertiflex procedure ($p=0.0144$ and $p=0.0011$ respectively). Severe central canal stenosis patients had a significant increase in the number of blocks they could walk before stopping due to pain ($p=0.0368$). Overall, fewer than half of patients in any stenosis group received a post-Vertiflex surgery or injection, and no patients had their Vertiflex explanted. Finally, the preoperative comparison between mild and severe neuroforaminal stenosis groups (n=13) was significant with a p value of 0.0444.
Conclusion: Vertiflex was shown to decrease overall pain levels in patients with both central canal and neuroforaminal stenosis. On average, it also increased the distance that both groups of patients could walk pain-free. Patients rarely had follow up procedures and each stratified group consistently had more patients who would recommend Vertiflex versus not recommend. We anticipate that these results will support a more general correlation between the Vertiflex procedure and an overall improvement in pain management for patients with LSS.