Transforaminal endoscopic decompression and uninstrumented allograft lumbar interbody fusion: A feasibility study in patients with end-stage vacuum degenerative disc disease

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Abstract

Objective: The authors investigated the feasibility of a transforaminal endoscopic decompression and un-instrumented lumbar interbody fusion procedures with cancellous bone allograft in patients painful with end-stage degenerative vacuum disc disease.

Patients & methods: Twenty-nine patients who underwent endoscopic transforaminal foraminal and lateral recess decompression and direct intraoperative endoscopic visualization of a painful, hollow collapsed, rigid intervertebral disc space were grafted with cancellous allograft chips. In addition to the radiographic assessment of fusion, patients were followed for a minimum of 2 years postoperatively, and clinical outcomes were evaluated with VAS, ODI, and modified MacNab criteria.

Results: At the final follow, mean VAS and ODI scores reduced from 7.34 ± 1.63 and 50.03 ± 10.64 preoperatively to 1.62 ± 1.741 and 6.69 ± 4.294 postoperatively ($p < 0.0001$). Excellent and Good clinical outcomes, according to Macnab criteria, were obtained in 34.5 % and 62.1 % of patients, respectively. Only one patient had minimal improvement from "Poor" preoperatively to "Fair" postoperatively. This female patient was treated for lumbar disc herniation L5/S1 and had an incomplete fusion at the final

follow up. Computed tomography assessment of interbody fusion at the last follow-up showed successful fusion in 91.4 % of patients.

Conclusions: Un-instrumented interbody fusion by packing a hollow interspace with cancellous bone allograft chips can be considered as an adjunct to endoscopic foraminal and lateral recess decompression in select patients with validated painful, collapsed, and rigid motion segments. It can be safely done in an outpatient setting at a low burden to patients.

Keywords: Allograft; Endoscopic lumbar decompression; Interbody fusion.

Biography

Alvaro Dowling is one of the national and international references in non-invasive spine surgery. He graduated from the University of Chile as a specialist in Orthopedics and Traumatology, with extensive experience and training abroad in countries such as South Africa, Spain, Switzerland, France, Colombia, Germany, Korea, and the United States.
He is recognized for his contribution to the academic world, being a current visiting professor at the University of Sao Paulo (USP), Past President of the Interamerican Society of Minimally Invasive Spine Surgery (SICCMI), author of study books abroad, and invited professor at national and international congresses.
Dr. Dowling's research has been published in over 10 papers, in posters and presentations. Furthermore, he has authored 8 book chapters and edited 1 book.

He currently serves as Director and Surgeon of the DWS Clinical Center in Santiago, Chile, conducting continuing education courses for doctors from all over the world.

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