

Conversion Rate of Lumbar Microdecompression to Fusion – 3 years follow up

Introduction

We reviewed lumbar surgical microdecompressive procedures and followed them longitudinally to determine the conversion rate of these patients to lumbar fusion. Many patients present with a combination of back and leg pain and a fusion versus a decompression can be considered. Modern minimally invasive fusion techniques have significantly decreased morbidity and recovery time and there has been a shift to increased Lumbar fusion rates in the United States. We sought to determine the viability and durability of decompression surgery over time.

Materials and Methods

We performed a retrospective chart review on all surgical patients from 2017 and selected for those undergoing a lumbar microdecompression or microdiscectomy. We then performed a similar review of patients undergoing surgery in 2018, 2019, and 2020. These data sets were compared and patients that returned for additional surgery on the same segment within 1, 2, and 3 years were identified. Patie

Results

108 lumbar microsurgical decompression and microdiscectomy procedures were completed in 2017. 5 patients required conversion to a fusion within 1 year. 3

additional patients within 2 years, and an additional 3 patients required a conversion to a fusion within 3 years. The 1, 2, and 3-year conversion rates were 4.6%, 7.7%, and 11%, respectively. 4 patients required revision of the L4/5 segment, and 5 patients required revision of the L5/S1 segment. 1 patient required a 2-level revision from L4/5 to L5/S1, and 1 patient had undergone a decompression from L3 through S1, but required fusion only at L5/S1. For one-level revisions, the indication for revision was a recurrent disc herniation in 50% of L4/5 revisions, and 80% of L5/S1 revisions.

Discussion

The data presented supports the role of decompression surgery as a viable option for patients. Well selected decompression patients have sustained good outcomes over the 3 years studied. This information is valuable for both patients when deciding on surgical options as well as surgeons that now have more surgical decompression options available such as endoscopic, tubular and other emerging techniques. The weaknesses of the study are its retrospective nature thereby specifically lacking inclusion and exclusion criteria. It was the senior authors sole judgment and shared decision making with the patient regarding surgical options that dictated the procedure performed. We will continue to follow the patients and report our 5-year results once available, but a prospective multicenter study with strict inclusion and exclusion criteria is needed.