

Hybrid Lumbar ALIF & Disc Arthroplasty



A 35-year-old male presented with chronic low back symptoms aggravated by a recent lifting injury. Despite extensive conservative measures of modified activities, anti-inflammatory medications, formal physical therapy, and injections, he continued with debilitating symptoms.

Exam:

The patient presented with significant pain in the lower lumbar spine with paraesthesias radiating to the buttocks and posterior thighs.

Imaging studies revealed advanced collapse of the L5-S1 disc space with neuroforaminal stenosis, impingement of the exiting nerve roots, recurrent disc herniations, and bilateral facet arthropathy. The L4-5 segment was notable for a broad-based disc bulge, annular tear, loss of T2 signal, and significant symptomatic degenerative disc disease.

Due to worsening symptoms and failure of conservative management treatments, the patient wanted to explore surgical options. With pathology at multiple lumbar segments contributing to his symptoms, both the L4-5 and L5-S1 levels needed to be addressed. Given the patient's younger age and varied pathology, a hybrid surgical procedure was utilized. The advanced disc space collapse with neuroforaminal stenosis and facet arthropathy of the L5-S1 segment was ideal for an ALIF (anterior lumbar inter body fusion) which would restore disc space height, neuroforaminal volume, and lordosis. Due to the patient's younger age and primarily degenerative disc changes exacerbated with acute injury with annular tearing and bulging, the L4-5 level was well suited for a disc arthroplasty.

Treatment:

The patient desired to proceed with the discussed procedure and underwent an L4-5 disc arthroplasty and L5-S1 ALIF. His surgery and hospital course were uneventful. He went home the day after surgery, with resolution of previous back and leg symptoms.

He progressed in activities commensurate with postoperative healing and worked back to all regular activities. He is now nearly 10 years post surgery and continues to do very well.

Discussion:

This patient's profile and varied pathology was quite unique, thus lending itself to a less conventional treatment approach utilizing a motion preserving technology disc replacement with a fusion device, which combined have served the patient very well.



