CASE STUDY | MATCH THE DISC

68-Year-Old Male with Hx of Radiating Neck Pain

By Jason Cuéllar, MD

Practice
Cuéllar Spine

Location
Jupiter, FL; Palm Beach, FL; Miami, FL

Area of Interest
Dr. Jason Cuéllar is an orthopedic surgeon who specializes in treating spinal disorders serving patients in South Florida. He is dedicated to providing compassionate surgical and non-operative treatments for all patients including artificial disc replacement, regenerative medicine, and injections of a novel biologic therapy for osteoarthritis. He is affiliated with DISC Sports & Spine West Palm Beach, Palm Beach Gardens Medical Center, and Jupiter Medical Center. In addition, he performs surgery at the SurgCenter of Palm Beach Gardens, Miami Surgical Center, and Lake Worth Surgical Center in Florida.

Education

PhD
University of California, Davis - Molecular, Cellular and Integrative Physiology, Davis, CA

Medical School
Stanford University, Stanford, CA

Orthopedic Residency
New York University - Hospital for Joint Diseases (NYU-HJD), New York, NY

Fellowship
Cedars-Sinai Medical Center, Los Angeles, CA

Board Certification
American Board of Orthopedic Surgery

SINCE 1990 35+ YEARS OF CLINICAL SUCCESS

CENTINEL SPINE®

PATIENT HISTORY

The patient has pain that radiates into the right trapezium and down into the forearm with numbness, tingling, and hand cramping. Symptoms have worsened over the past 18 months despite conservative treatments including physical therapy and chiropractic care.

Patient is tall and very active; he runs a men's healthcare company.

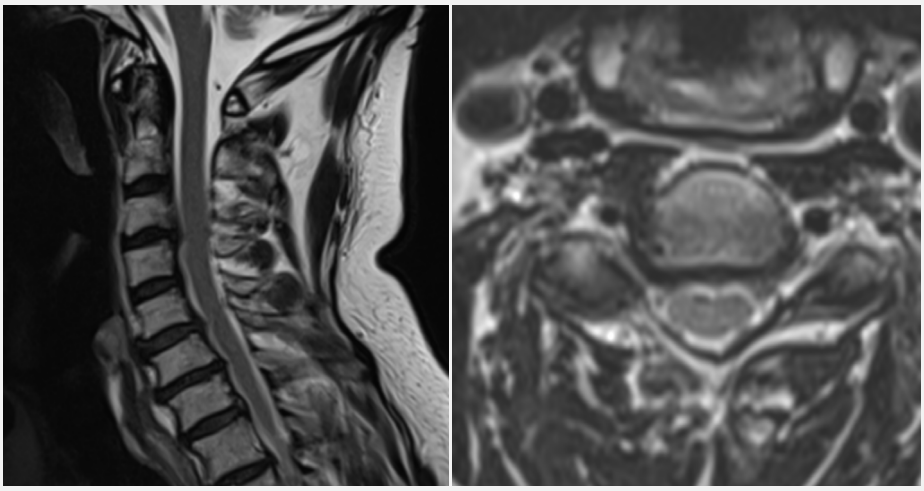


FIGURE 1: C5-6 pre-operative MRI (lateral and axial views)

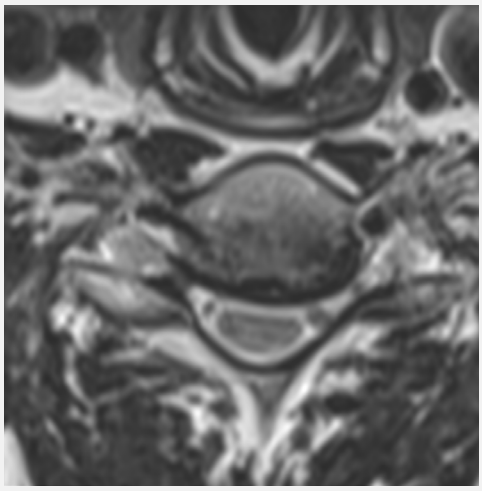


FIGURE 2: C6-7 pre-operative MRI (axial view)

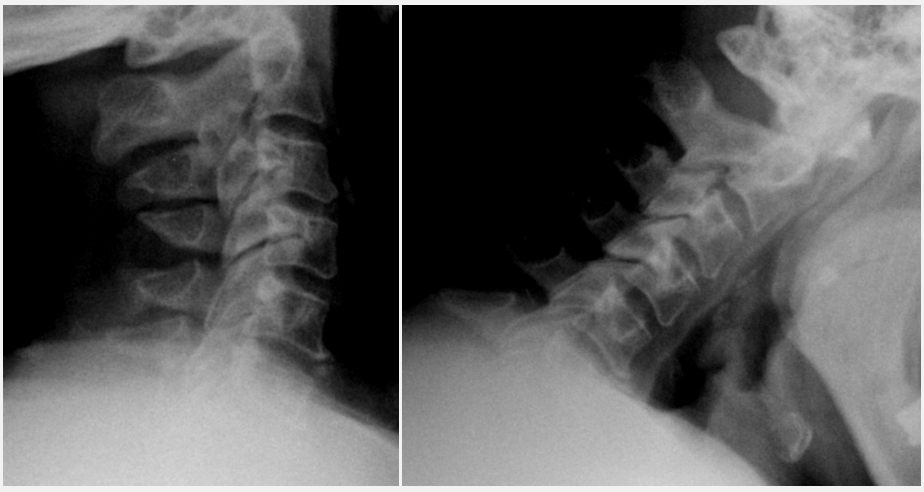


FIGURE 3: Pre-operative flexion-extension x-rays

FIGURE 4: Pre-operative A/P x-ray

OPERATIVE PLAN

Pre-op MRI demonstrates partial disc height collapse and foraminal stenosis at C5-6 and C6-7.

Pre-op dynamic radiographs demonstrate partial loss of disc height at C5-6 and C6-7 without instability or scoliosis.

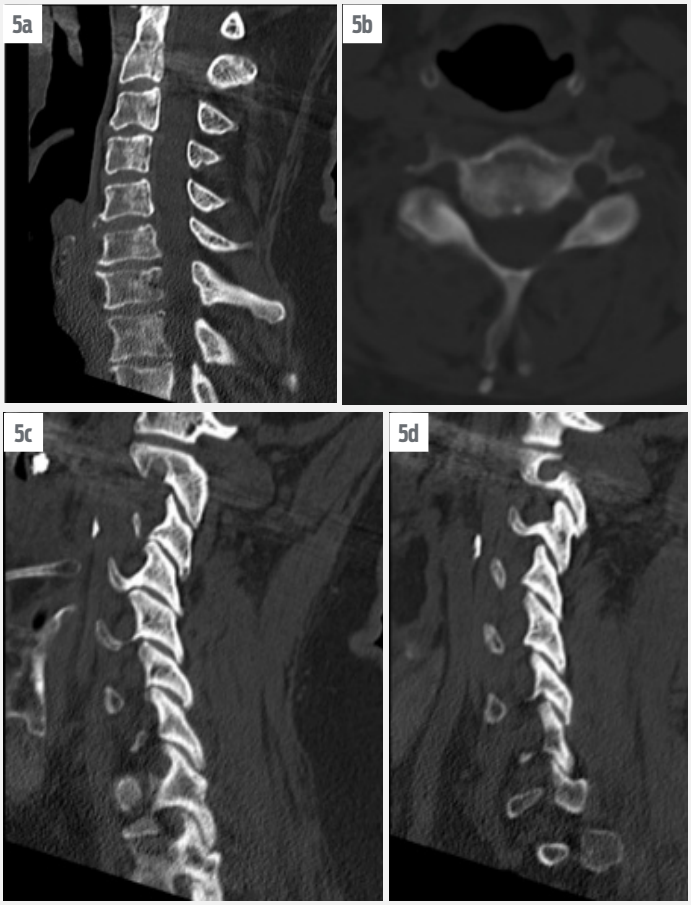
Pre-op CT demonstrates right C5-6 uncovertebral joint osteophyte causing foraminal stenosis but minimal facet arthrosis.

Fusion was not considered for this active patient. Disc replacement is my 'default': if there is not a major reason to do a fusion—such as spinal instability—disc replacement is my automatic go-to.

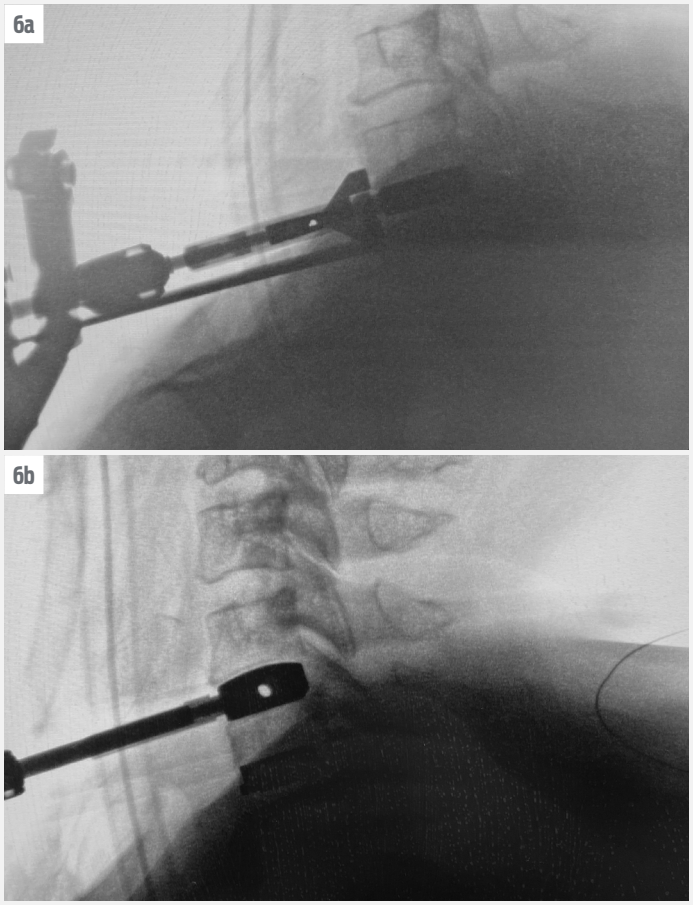
Based upon pre-operative imaging, a two-level prodisc C Vivo was expected, however a mixed prodisc C Vivo & prodisc C SK was considered possible, as well.

During intra-operative trialing after discectomy and foraminotomies, I felt that the best fit at the C6-7 level was with a prodisc C SK—6mm tall by 18mm deep (Figure 6a). I then performed the discectomy and trialing at the C5-6 level and felt that the prodisc C Vivo was a perfect fit here (Figure 6b).

The patient's height likely contributed to needing a 6mm size. About 25% of the time, I find I need to bump up to a 6mm implant—but, ultimately, I base my decision upon what I see during trialing.



FIGURES 5a, 5b, 5c, & 5d: (a) Sagittal CT midline slice, and (b) axial CT slice at C5-6 and (c,d) lateral CT slices showing the right foraminal stenosis and facets.

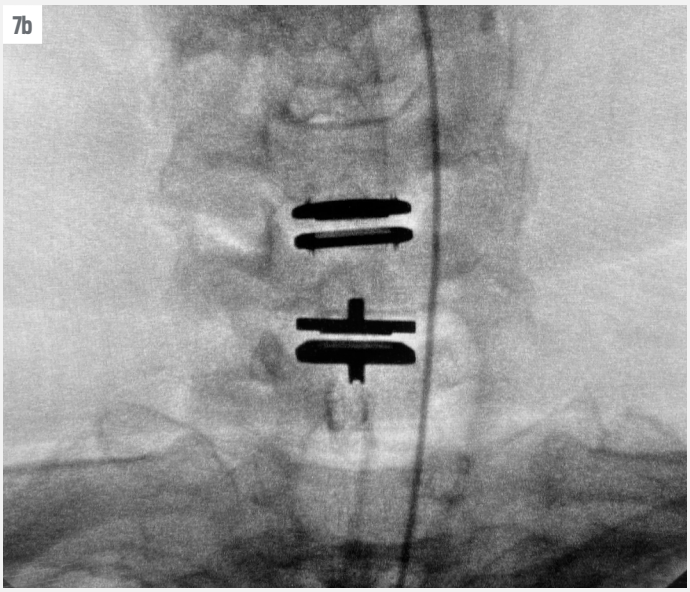


FIGURES 6a & 6b: Intra-operative trialing at the C6-7 level with the prodisc C SK trial (a) & C5-6 level with the prodisc C Vivo trial (b).

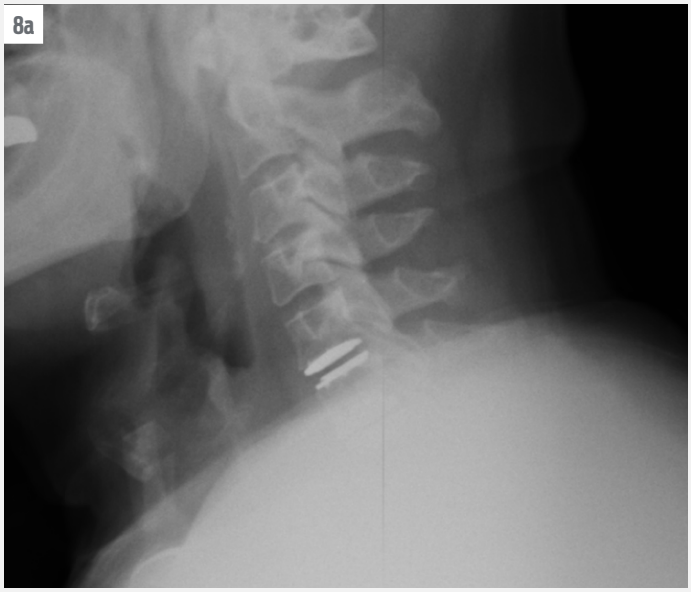
DISCUSSION

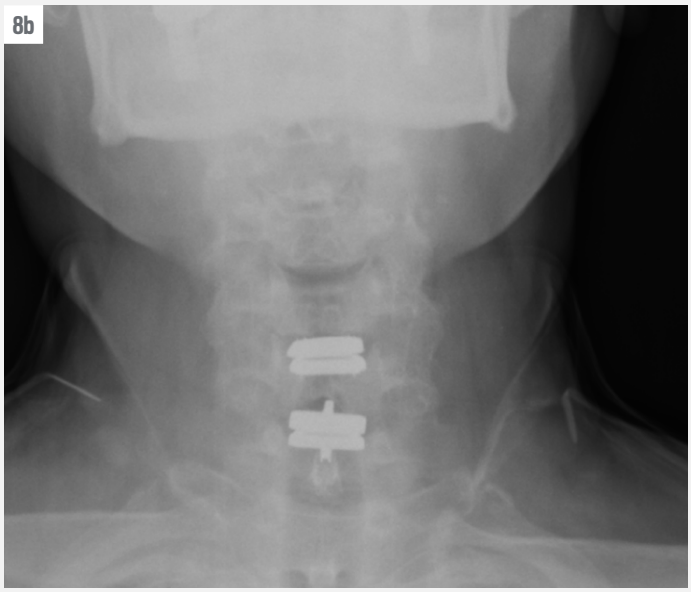
The patient's symptoms have completely resolved. The x-rays in Figure 8 were taken at the first post-op visit at 2 weeks.

I love having access to the variety of options that prodisc offers. As a backup during the procedure, I even have the original prodisc C implant available in the room to see what fits best during surgery.



FIGURES 7a & 7b: Immediate post-operative fluoroscopy of the prodisc C Vivo & prodisc C SK devices in (a) lateral and (b) A/P views.





FIGURES 8a & 8b: 2 weeks post-operative x-rays of the prodisc C Vivo & prodisc C SK devices in (a) lateral and (b) A/P views.