



Multi-level Oblique Lumbar Interbody Fusion Using Ceramic Silicon Nitride Implants

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SUMMARY

A 65 year old, female patient with a 20 year history of narcotic pain management after L4-5 lumbar interbody fusion, underwent a two-level oblique lumbar interbody fusion procedure at L2-3 and L3-4 using silicon nitride implants. Rapid fusion and correction of spondylolisthesis were achieved, in addition to excellent clinical outcomes and dramatic reduction in long-term narcotic usage.

DIAGNOSIS & PROCEDURE

Twenty years after prior L4-5 lumbar interbody fusion using allograft bone, patient had progressively worsening mechanical low back pain. She increasingly used narcotics for chronic back pain management. Severity of low back pain and pain in both legs were each rated an 8 out of 10. While leg strength was intact, patient exhibited patchy sensory changes, mainly in her right leg. Multiple steroid injections, increased narcotic dosages and other conservative treatments did not resolve symptoms.

X-rays showed the original L4-5 fusion was intact, but there was 7mm of anterolisthesis at L3-4 above. Degenerative retrolisthesis was evident at L2-3. Subsequent CT myelogram revealed severe stenosis and lateral recess impingement at both L2-3 and L3-4.

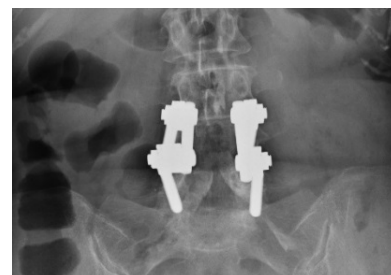
Surgical intervention included decompression and OLIF at L2-3 and L3-4 with reduction of spondylolisthesis and bilateral instrumentation at L2-L4. Ceramic silicon nitride implants (**Amedica Valeo™ OL** - 10mm height, 9x29mm footprint) packed with cellular allograft, were used for both levels. During the procedure, the original L4-5 posterior hardware was removed.

RESULTS

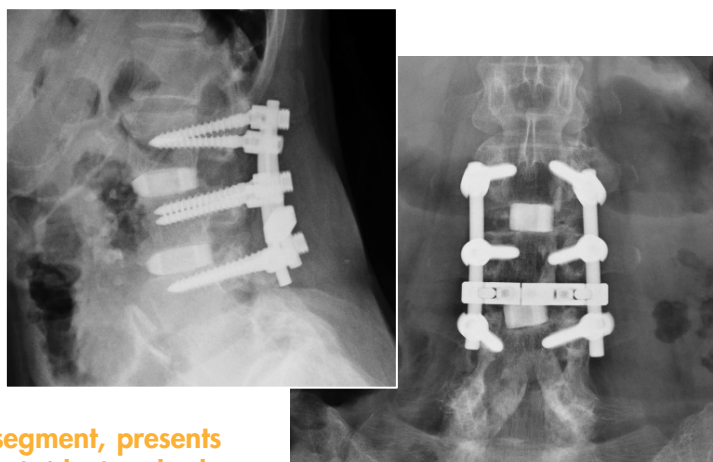
At 3 months postoperative, patient had no leg pain and plain radiographs showed progressive fusion. At 5 months postoperative, complete radiographic fusion was achieved. At 8 months postoperative, patient had dramatic relief of back pain and felt the surgery was a great success.

CONCLUSIONS

This case of adding levels to a previously fused segment, presents excellent outcomes with the Valeo™ OL silicon nitride interbody device. Patient's pain and narcotic usage were markedly reduced after a 20 year history. Plain radiographs revealed excellent alignment and complete fusion at just 5 months postoperative.



Preoperative AP radiograph



Lateral and AP radiographs of two-level Valeo™ OL at 5 months postoperative