

Revised Infected Fusion  
Supplemented with  
PEMF Bone Growth  
Stimulation

## Nonoperative Salvage of Failed Spinal Fusion Using Bone Growth Stimulation

Patient is a 71 year-old gentleman who underwent laminectomy at L3-4 and L4-5 in 1994 for bilateral lower extremity pain. Patient did well until 1997, when he developed lower back pain and left lower extremity pain when walking and standing. These symptoms progressively worsened, requiring the patient to seek treatment in August 1998. At that time, the patient was diagnosed with spinal stenosis and degenerative instability of L3-4, L4-5, and L5-S1. Multi-level surgical decompression and stabilization was planned.

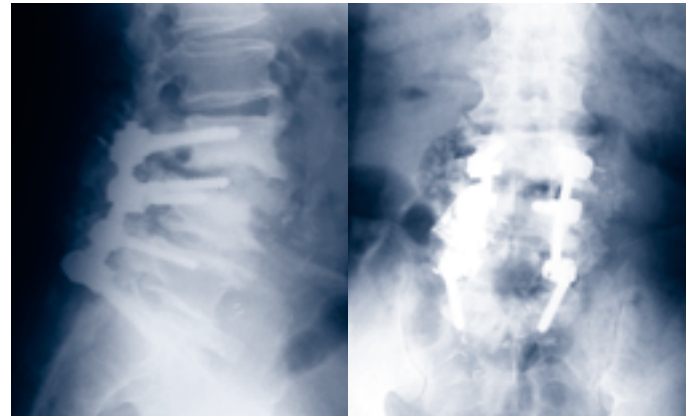


**Patrick W. Bowman M.D.**

A partner at Nebraska Spine Center, Omaha, NE., is certified by the American Board of Orthopedic Surgery. Dr. Bowman is not a paid consultant and has no financial interest in Orthofix Inc.

**November 24, 1998**

Decompression and L3-S1 bilateral facetectomy, anterior interbody fusion L4-S1, posterior instrumentation with TSRH, lateral mass fusion L3-S1 and insertion of EBI implantable bone stimulator.



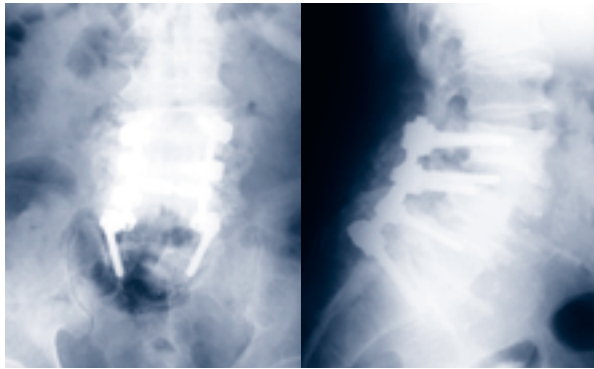
**December 3, 1998**

Approximately one week post-op, the patient developed increasing leg and lower back pain and was discovered to have an infected lumbar wound. The wound was incised and drained, and the EBI stimulator was removed.



**December 9, 1998**

A Groshong catheter was placed two weeks post-op for the administration of chronic IV antibiotics. The patient developed further leg and hip pain, and was discovered to have a large abscess below the L5-S1 disk space. The L5-S1 space and abscess was debrided and irrigated, and the bone grafts were replaced due to instability.



**March 15, 1999**

The patient continued to experience hip pain. X-rays taken at four months post-op revealed loosening of the screws in the L5-S1 area with migration of all three grafts in a graduated fashion.



**April 14, 1999**

At five months post-op, a probable pseudoarthrosis was determined at the L5-S1 area. An Orthofix external stimulator (Spinal-Stim® Lite) was placed for stabilization treatment.

**May 25, 1999**

Approximately one month after placement on the external stimulator (six months post-op), the patient's pain had completely resolved, requiring no regular medication. The patient was instructed to continue treatment with the external stimulator to bring about consolidation of L5-S1.



**July 20, 1999**

The patient continued to improve. X-rays obtained three months post-placement of the external stimulator (eight months post-op) revealed filling in of halos about the sacral pedicle screw with what appeared to be a solid bridge of bone.



**October 12, 1999**

Approximately six months post-placement of the external stimulator (11 months post-op), the patient had increased his activity level and continued to require no prescription analgesics. X-rays revealed consolidation of the lumbosacral spine. It is the opinion of the treating physician that the external stimulator was successful in bringing the patient to solid fusion.



If you have a difficult or unique case that you would like to have considered for publication, contact your Orthofix representative, or call 1-800-535-4492.