Case Report

A seventy-seven year old female presented with ongoing back and lower extremity pain. She was diagnosed with degenerative lumbar scoliosis, stenosis, lumbar radiculopathy and neurogenic claudication. Since she had failed extensive nonoperative conservative treatment, surgical intervention was an option for her.

Various surgical treatment options were considered. First, the goal of surgery had to be determined. One goal was to decompress the nerves. It was hoped that by decompressing the nerves, the lower extremity symptoms would improve. Options for decompressing the nerves would be laminectomy or foraminotomy. Her second chief complaint was that of axial back pain. Axial back pain can originate from many sources, including the arthritic changes associated with degenerative scoliosis. Axial back pain would not be relieved by nerve decompression. A third concern was the possibility of her lumbar scoliosis progressing even further without any surgical intervention. Fusion of the vertebrae would be indicated to relieve the axial back pain and align the lumbar spine. Additionally, an indirect decompression of the nerves at the foramina could be performed by improving the alignment of the scoliosis.

Surgical Procedure

In an effort to address these three goals, we elected to proceed with the direct lateral interbody fusion of the lumbar spine. This minimally invasive retroperitoneal approach allowed for significant improvement in the patient’s scoliosis deformity and indirect decompression of the foramina, as well as the canal, during realignment. It also required significantly less posterior surgery than would have been required if the full decompression had been done directly.

Results

This procedure allowed the patient to be mobilized sooner than traditionally would have been an option for her. This can help decrease the risk of postoperative morbidities associated with prolonged bed rest and decreased activities. Preoperative versus postoperative radiographs demonstrated significant improvement in the lumbar scoliosis. Her clinical
report demonstrated significant improvement of both axial back pain as well as her lower extremity symptoms.

Discussion

Direct lateral interbody fusion is an innovative surgical procedure. This surgical procedure expands upon the advantage of a retroperitoneal approach to the anterior lumbar spine. It involves using a technique of entering the disc, preparing the disc, and placing an implant for interbody fusion through a more lateral approach. This is directed through and between the muscle fibers of the psoas muscles to enter the disc space. This facilitates the use of smaller skin incisions while maintaining the benefits of the retroperitoneal approach. The direct lateral interbody techniques appear to offer a significant improvement in the treatment of some patient’s conditions. This approach is a useful tool for a well rounded surgeon to have.

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Dr. Hasz is board certified by the American Board of Spine Surgery. He is a fellow in the American Academy of Orthopaedic Surgeons and a member of both the American Association of Orthopaedic Surgeons and the North American Spine Society. He was Chairman of the Department of Orthopaedic Surgery and Director of Spinal Surgery at the Andrews Air Force Base / Malcolm Grow Medical Center in Maryland. He currently holds an appointment as Clinical Instructor of Orthopaedic Surgery and Assistant Professor of Surgery at the Uniformed Services Health Science University in Bethesda, Maryland.