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Clinical Image
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Extreme-Lateral Lumbar Inter Body (XLIF) Fusion plus Posterior Percutaneous Screw Fixation – A Minimally Invasive Approach to Degenerative Scoliosis

Flávio Ramalho Romero[1], Rodolfo Brum Vieira[2] and Bruno da Costa Ancheschi[3]*

[1]*Department of Neurology, Sao Paulo State University, Brazil*

[2]*Division of Neurosurgery, Hospital das Clínicas de Botucatu, Brazil*

[3]*Division of Orthopedic and Spine Surgery, São Paulo State University - UNESP, Brazil*

Clinical Image

Degenerative scoliosis is defined as a spinal deformity in a skeletally mature patient with a Cobb angle of more than 10° in the coronal plain caused by progressive and asymmetric degeneration of the disc, facet joints, and other structural spinal elements typically leading to neural element compression. The prevalence of degenerative scoliosis ranges from 6% to 68%. With an aging population, degenerative scoliosis has become a considerable health care concern, not only cosmetically, but also, as a cause of significant pain and disability [1]. About 90% of patients presents with low back pain with or without radicular leg pain and/or neurogenic claudication. Back pain is due to instability of one or more spinal segments and consequent spinal muscle fatigue [2]. Treatment for degenerative scoliosis is a challenging. Several factors, such as medical comorbidities, social, and environmental, play significant roles in the outcome and the need for thorough evaluation. It is well know that smoke, diabetes, osteoporosis, asthma or chronic obstructive pulmonary disease; coronary or cerebrovascular disease, nutritional deficiency, and depression are related with poor clinical outcomes or increased surgical risks [3]. Patients with intractable radiculopathy or back pain despite concentrated non-operative therapy and with neurological deficits may be surgical candidates. Results are heterogeneous and depend on many factors. Decompression and instrumented fusion are the standard surgical treatment, but long segment fusion (Figure 1), sometimes including iliac screws, is needed to achieve good biomechanical restoration. The decompression and fusion have good results in terms of pain relief, walking ability, and patient satisfaction, but morbidity and mortality rates are high in those patients [4].

Extreme lateral inter body fusion (XLIF – Figure 2,3) have been used as a minimally invasive alternative to improve sagittal and coronal balance with less complication rates and significant good outcomes in that group of patients. Here, we present an example of degenerative scoliosis patient treated with XLIF and posterior percutaneous screw insertion, focusing on preoperative, operative and postoperative images [5].

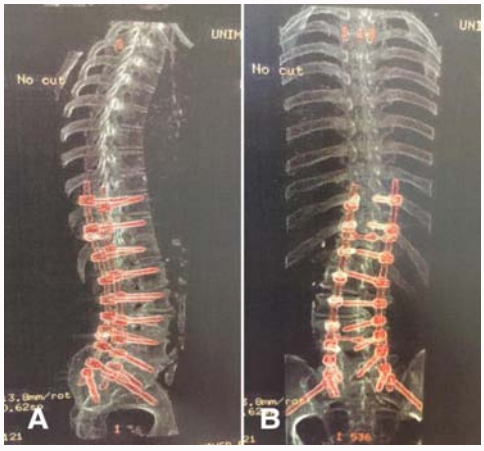

Figure 1: 3D CT reconstruction of traditional open T10-iliac screw fixation for a degenerative scoliosis patient.

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Correspondence:
Flávio Ramalho Romero, Department of Neurology, Psychiatry and Psychology, Botucatu, Sao Paulo State University, Zip Code: 18.618-970, Brazil, Tel: 55 14 - 33543594/55 14 - 996017720; E-mail: frromero@ig.com

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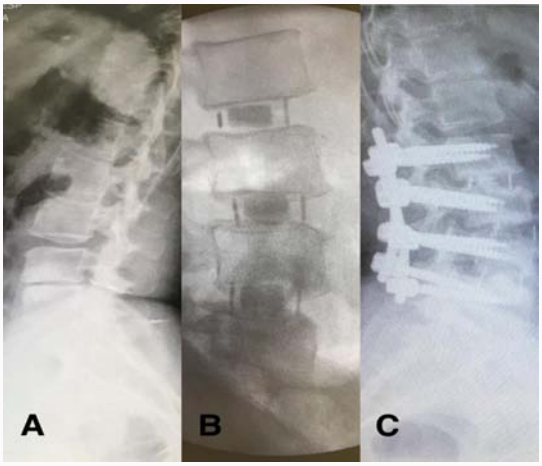

Figure 2: Anterior view comparing preoperative, intra operative and postoperative images of XLIF plus posterior percutaneous screw insertion.

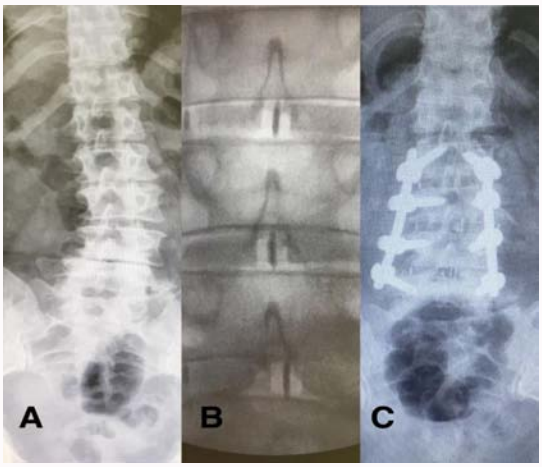

Figure 3: Lateral view comparing preoperative, intra operative and postoperative images of XLIF plus posterior percutaneous screw insertion.

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