Savannah HEALTH PERSPECTIVE©

Scoliosis

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Scoliosis of the spine can best be described as an abnormal curvature that may lead to painful symptoms and may progress with time. These curves often arise because of multiple variables including genetics that are not yet clearly delineated. In the adult spine, Degenerative Scoliosis arises because of "wear and tear" on the spine beginning with degeneration of the intervertebral discs. Like arthritis found in other joints of the body, the weak link of the spine is the intervertebral disc which is analogous to cartilage. As this cartilage begins to wear, a relative loss of both stability and conformation of the spine results in the degenerative cascade causing further arthritic changes that may lead to painful degenerative scoliosis.

Hallmarks of adult degenerative scoliosis include asymmetric intervertebral disc wear, significant loss of disc height, and often subluxation or sliding of vertebra on an adjacent vertebra. Occurring in up to 15 percent of the adult population, degenerative scoliosis most often becomes symptomatic in patients in their sixth decade. Symptoms may include arthritic back pain, compression of nerves resulting in painful radicular (radiating) leg pain and/or neurogenic claudication, progressive curvature and symptoms, muscle fatigue from compensating for the abnormal curvature, and the psychological stigmata of living with a visible deformity.

Goals of treatment are to maintain functionality, flexibility, and stamina while reducing pain and halting curve progression. Unfortunately, attaining all of these goals may not be possible with conservative or non-operative treatment. Non-operative treatment includes aerobic conditioning, physical therapy to improve flexibility and strength, non-steroidal anti-inflammatories (NSAIDs), epidural steroid injections specifically for nerve root impingement or spinal stenosis, and at times, bracing. If these modalities fail, then surgery may be a viable treatment option.

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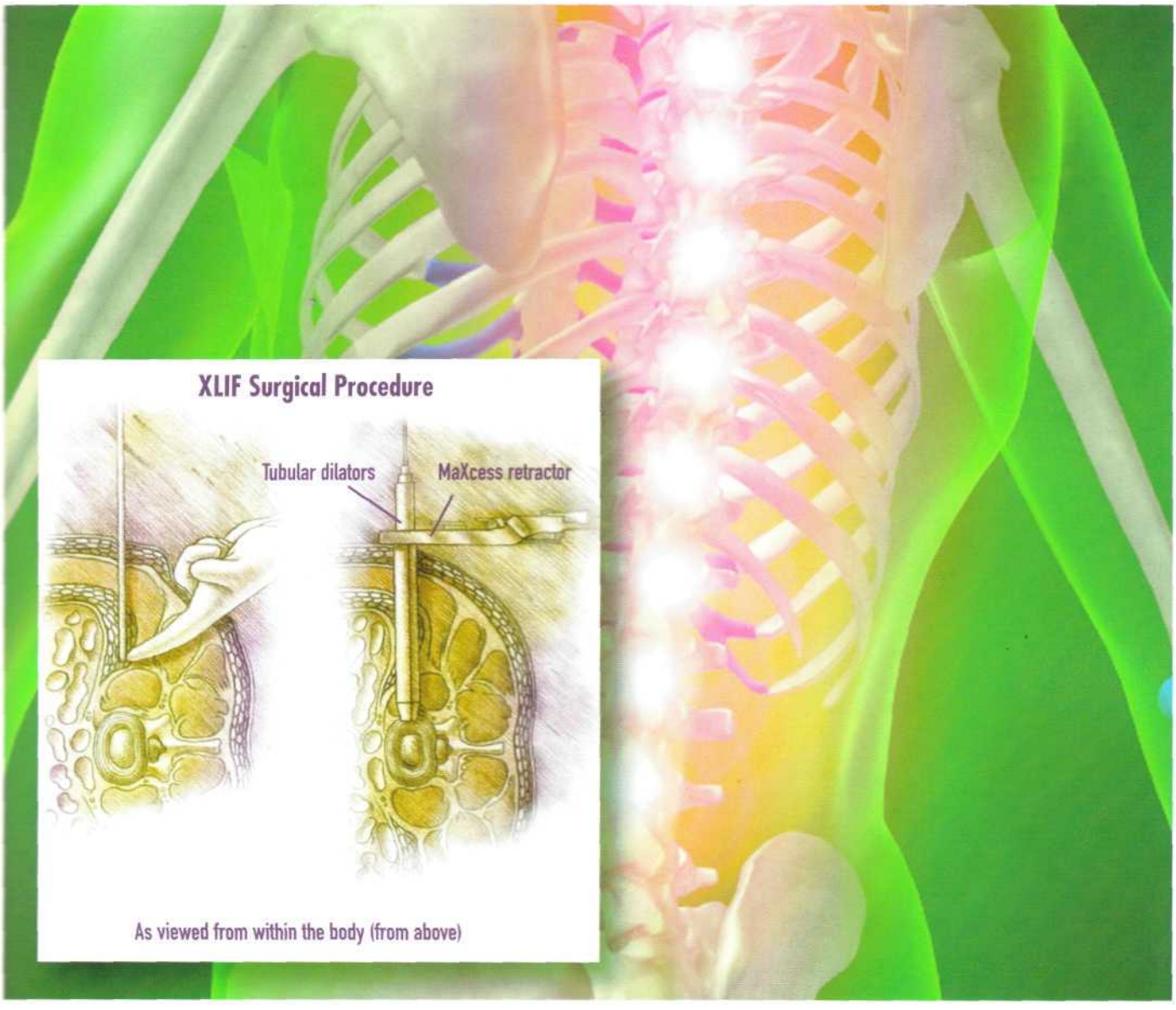
Like conservative treatment, the goals of surgery for degenerative scoliosis are to reduce pain and restore function. However, surgical treatment also has the potential to correct and stabilize the curve as well as decompress painful nerves. Historically, patients who have symptomatic back pain and/or leg pain from compression on nerves caused by degenerative scoliosis have benefited from combined fusion and decompression surgery. Good long term results have been attained in patients with satisfaction rates as high as 86 percent and relief of pain up to 94 percent. This is of course when successful stabilization (fusion) and decompression of the spine occurs. A reduction of the curve with reconstruction of the disc space has been shown to aid successful fusion as well as decompression of nerves trapped or pinched within the curve. Unfortunately, it has also been shown that traditional procedures for degenerative scoliosis have become complicated by lengthy surgical times, extensive soft-tissue (muscle) dissection, long recovery times and substantial blood loss. Further complicating



matters is the challenge of achieving hardware fixation for fusion in the elderly, osteopenic (low bone density) spine. In response to these challenges, new techniques adherent to the principals of minimally invasive surgery (MIS) have been developed specifically to safely and reproducibly attain the goals of conventional surgery while limiting blood loss, post-operative pain, soft tissue dissection, and length of hospital stay.

Developed by Dr. Luiz Pimienta of Brazil, the XLIF technique of spinal fusion and decompression is one such minimally invasive technique particularly effective for certain cases of degenerative scoliosis. XLIF (eXtreme Lateral Interbody Fusion) involves a novel approach to the spine via a lateral approach through the patient's flank, taking advantage of an area known as the retroperitoneal space allowing for minimal soft tissue dissection. With direct access to the lateral spine and intervertebral disc, XLIF also allows for a near complete removal of the pathologic and degenerative disc and for reconstruction of the disc space providing the most conducive location for bone growth (fusion) while effectively restoring or improving spinal alignment (reduction of curve) and providing space for pinched nerves (decompression).

The results of XLIF for patients with degenerative scoliosis and other degenerative spinal conditions have been nothing short of spectacular. While achieving successful arthrodesis, curve correction, and nerve decompression, a significant number of patients have shown minimal blood loss, minimal post-operative pain, and an average of only one night in the hospital post-op.

Degenerative scoliosis can be a debilitating pathology that adversely effects the adult population. When conservative therapies fail and the patient's quality of life is such that surgical intervention is considered, the goals of surgical treatment include not only stabilization, correction, and decompression, but also to do so in the safest and least traumatic technique possible.

For more information about scoliosis or other spine concerns – contact Dr. Roybal at Chatham Orthopaedics, 4425 Paulsen Street, Savannah, GA 31405, or call him at (912) 355-6615.