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Degenerative Lumbar Spondylolisthesis and Its Treatment

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Perspective

One of the most prevalent causes of low back pain is degenerative lumbar spondylolisthesis, which is defined as a displacement of one vertebra over a subordinate vertebra that is not accompanied by a rupture or defect in the vertebral ring. It's critical to understand the natural history of degenerative spondylolisthesis in order to create a treatment plan that is unique to each patient. Patients with low-grade spondylolisthesis who have radiculopathy or pseudoclaudication may benefit from a trial of conservative treatment. Physical therapy, epidural steroid injections, and pain medicines are some of the treatments available. Decompression alone or decompression and fusion are surgical alternatives if the problem persists. Low back discomfort is caused by degenerative lumbar spondylolisthesis, which affects 11.5% of the population in the United States. Conservative treatment options for patients with symptomatic lumbar spondylolisthesis include, but are not limited to, non-narcotic and narcotic pain medicines, epidural steroid injections, transformational injections, and physical therapy. Surgical treatment is recommended for well-selected individuals who have failed conservative care methods.

The treatment guidelines for lumbar spondylolisthesis are summarised in this article. Low back discomfort and neurological impairments can be caused by lumbar spondylolisthesis. For lumbar spondylolisthesis, this review covers the clinical history, neurological examination, clinical presentation, imaging modalities, and current therapeutic recommendations. According to available clinical trials, surgical treatment of symptomatic spondylolisthesis offers a significant clinical benefit when compared to nonsurgical care in the presence of progressive neurological deficits; cauda equine syndrome; failure of an adequate response to conservative therapy: radiographic instability with neurological symptoms; radiographic progression. Optimizing diagnostic pathways and surgical indications, as well as standardising surgical procedures and outcome measurements with validated instruments, should help the spine care community collect data needed to provide the best evidence-based treatment while reducing or eliminating procedures with no evidence of efficacy or value.

However, there has been a change in the way this condition is treated. There have been a number of seminal publications that have influenced our treatment. The treatment arms of the Spine Patient Outcomes Research Trial (SPORT), which provides the best quality data to date, were based on these. Despite the fact that fusing of the diseased segment tends to provide the greatest and most long-lasting outcomes, therapy for this condition are best suited to the individual. Fusion may provide the finest outcomes in a youthful active patient, but those same results may never be seen in a medically infirm patient. Laminectomy, also known as unilateral laminoforaminotomy, is still used to treat illness. This review will concentrate on the diagnosis and treatment of DS, as well as the author's recommended method of therapy. An anomaly in the pars interarticularis causes anterior translation of one lumbar vertebra relative to the following caudal segment, resulting in lumbar isthmic spondylolisthesis.

Symptomatic individuals may report with low back and/or radicular leg discomfort, despite the fact that it is most commonly an asymptomatic radiological result. Surgery may be recommended in the event of persistent symptoms despite nonoperative therapy. The main aims of surgical therapy, which has shown reasonable long-term results, are successful arthrodesis and, where necessary, neurologic decompression. There are several surgical treatment methods available, each with varying degrees of effectiveness based on patient-specific data. The forward translation of the fifth lumbar vertebra (L5) over the first sacral vertebra is known as lumbosacral spondylolisthesis (S1).

The major cause of lumbosacral spondylolisthesis is a bilateral L5 pars defect (spondylolysis) or repeated stress damage. The severity of a slip is frequently related to the severity of symptoms. In general, population, spondylolysis (pars defect) affects 6% of people, with a third of them developing spondylolisthesis at some point. Only a tiny number of symptomatic individuals require surgical surgery, while the majority of cases are mild or asymptomatic. Children and adolescents who participate in sports that involve repetitive lower back hyperextension are the most often afflicted demographics (divers, pace cricket bowlers, baseball, softball, rugby, weightlifting, sailing, table tennis, wrestlers, gymnasts, dancers, and footballers). Lower back discomfort that is worsened by activity is the most common symptom. Pain may extend to both the buttocks and the legs on rare occasions, and in severe situations, the gait pattern and walking distance may be impaired. Adults' symptoms are more subtle, and they're typically accompanied with long-term degenerative changes caused by the slide, such as spinal canal stenosis and radicular discomfort. The majority of cases are managed without surgery; however individuals who fail non-operative therapy and continue to have severe symptoms may require surgery. Spondylolysis and spondylolisthesis in children can cause a wide range of pathologies and clinical symptoms, such as back discomfort, leg pain, crouch gait, and neurological deficits. Spondylolysis is usually treated conservatively with bracing, nonsteroidal anti-inflammatory drugs, and activity limitation.

However, persistent pain can be successfully controlled surgically using intralaminar compression screws, wires, or pedicle screws with rods and laminar hook constructions. Dysplastic spondylolisthesis requires urgent therapy to avoid neurological impairments, but even high-grade isthmic slips can be safely treated with nonoperative methods if no major neurological deficits exist. Patients with larger slip angles, on the other hand, are more likely to progress and require fusion. To evaluate the results of surgical vs. nonoperative therapy of high-grade slips, more long-term data is needed. Although more data is needed to guide surgical therapy, the great majority of these individuals are successfully treated without surgery.

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