

Degenerative changes in the spine are often referred to those that cause the loss of normal structure and/or function. **Degenerative spondylolisthesis (DS)** is a disorder that causes the forward motion (slip) of one vertebral body over the one below. The term "spondylolisthesis" is formed from 2 Greek words: "spondylo," which means vertebra, and "listhesis," which means to slide on an incline. DS is most common in the lumbar spine (L4-L5,) and may cause low back pain.



The image above shows spondylolisthesis at the L4-L5 level.

Many patients with the radiographic finding of degenerative spondylolisthesis are successfully treated without spine surgery. Unless there is significant neurologic impairment, a trial of conservative/non-operative care is generally warranted. If the patient's symptoms are persistent, then surgical intervention may be appropriate. In terms of a surgical option, decompression (to address nerve-related symptoms) and stabilization/fusion are the two most often considered. Depending on the patient's pattern of symptomatology and radiographic findings, decompression alone, fusion alone, or a combined decompression and fusion may be considered by the treating surgeon.

Symptoms and Non-operative Treatments for Spondylolisthesis

Typical symptoms include low back pain, muscle spasms, thigh or leg pain, and weakness. Interestingly, some patients do not have symptoms and may learn that they have the spine condition after spinal radiographs.

Low back pain associated with DS is typically treated using non-surgical treatments. During the acute pain phase, bed rest may be recommended for a few days. Activities involving heavy lifting are prohibited to prevent stress to the lumbar spine.

Spondylolisthesis Medications

During the acute phase of low back pain, medications may be prescribed. Some of these may include narcotics, acetaminophen, anti-inflammatory agents, muscle relaxants, and anti-depressants.

- Narcotics are used on a short-term basis partly due to their addiction potential.
- When low back pain is caused by muscle spasm, a muscle relaxant may be prescribed. Muscle relaxants are usually used no longer than one week and have sedative effects.
- Depression can be a factor in chronic low back pain. Anti-depressant drugs have analgesic properties and may improve sleep.

Bracing and Physical Therapy for Spondylolisthesis

Other conservative, non-surgical treatment may include a custom-made brace. A brace is designed to reduce the loads (weight) to the lumbar spine. Physical therapy may also be added to the treatment plan. Forms of therapeutic exercise, including stretching, may improve the flexibility of the trunk muscles. Other non-aerobic exercises may help to improve muscular endurance, coordination, strength, and facilitate weight loss. Exercise also helps to combat anxiety and depression (important for managing pain).

Disease Progression and Neurologic Deficit

Although degenerative spondylolisthesis may cause a vertebra to slip forward, that does not always mean the disorder is progressive. The vertebral segment may be stable without any neurologic compromise. Surgery becomes a consideration when the disorder causes neurologic deficit, such as incontinence or the slip progresses. Spinal fusion and instrumentation may become a consideration if slippage exceeds 3 millimeters. These surgical procedures stabilize the spinal column.

The surgeon bases his/her decisions on the patient's medical history, symptoms, radiographic findings, as well as the degree and angle of the vertebral slip. Patients who use tobacco or who are overweight are known to experience lower rates of success with fusion. Nicotine hampers the fusion process and being overweight places excessive weight on the lumbar spine.

Conclusion

Although older adults can expect some degenerative processes to occur in their spines, this certainly does not point to a future facing disability. In general, spondylolisthesis only affects a small percentage of the population. Overall, most degenerative disorders of the spinal can be treated using non-surgical treatments.

Read more about degenerative spondylolisthesis at spineuniverse.com