

Retrolisthesis of the Fifth Lumbar and First Sacral Vertebra in a 17 Year Old High School Football Athlete: A Case Study

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Background Information

- Condition of the spine in which the vertebral body is displaced posteriorly
- Similar condition to Spondylolisthesis which is more common
 - Anterior slippage of the vertebral body
- Retrolisthesis at the level of L5-S1 has an incidence of 23.2%
- Retrolisthesis can be caused by congenital laxity or by a gradual elongation of the vertebral ligaments
- Symptomatic presentation varies and depends on degree of displacement
 - Nerve root compression
 - Mechanical pressure on the joint

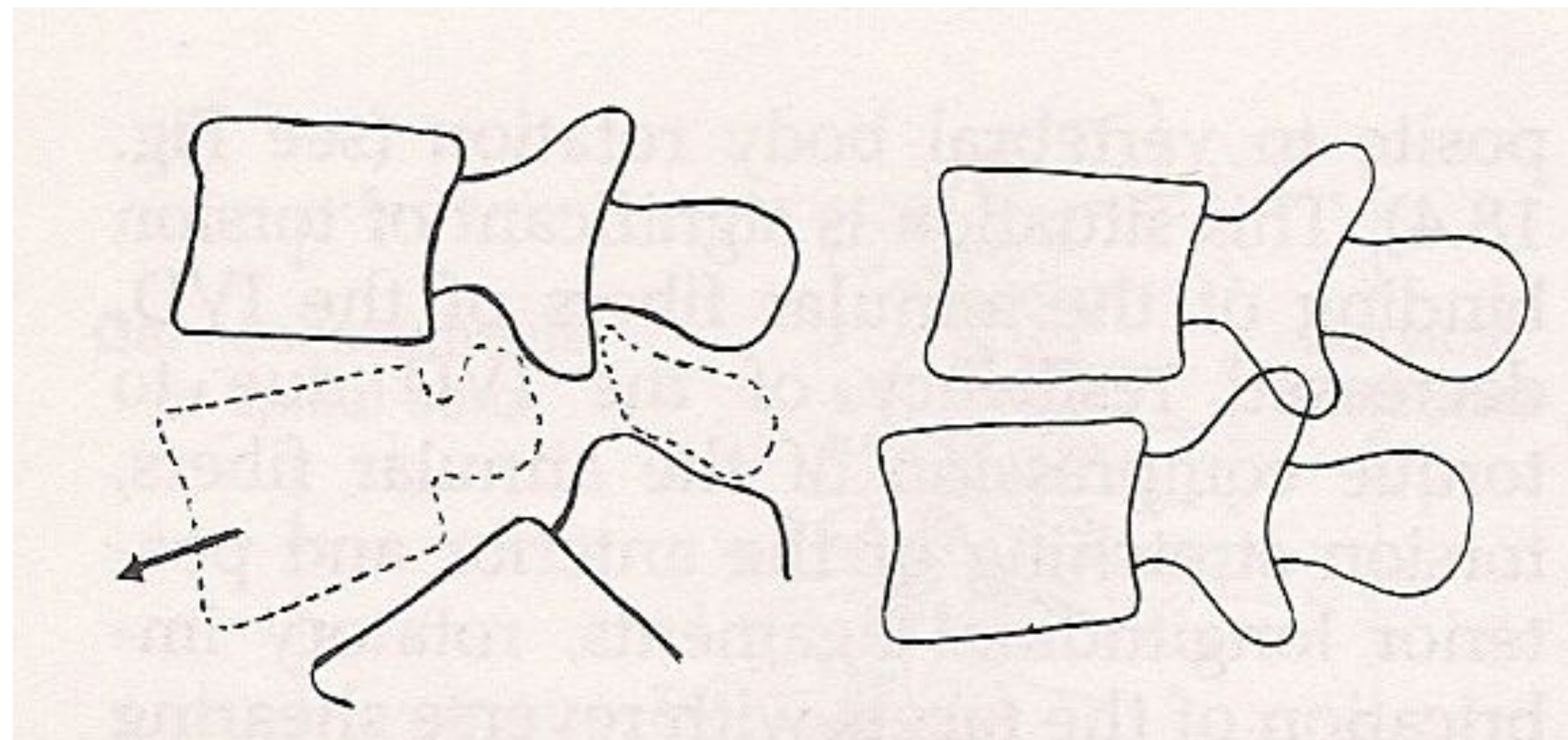


Figure 1: Spondylolisthesis (left) vs. Retrolisthesis (right)
Retrieved from: https://chiro.org/ACAPress/Basic_Spinal_Subluxation_Considerations.html

Conclusion

- Patient was cleared for full contact six months after starting rehabilitation
- Retrolisthesis is more rare compared to spondylolisthesis but may result in similar pain and dysfunction
- Radiographs are the gold standard in identifying retrolisthesis

References

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Interventions

- Most common intervention for retrolisthesis is non-surgical
- Surgical correction of retrolisthesis is typically completed with a displacement of two millimeters or more
- Therapeutic exercise to strengthen the muscles of the low back and core focusing on stabilization and extension
- Physical therapy
- Restriction from weight lifting
- Treatment with heat and soft tissue mobilization

Diagnostic Imaging

- X-ray and Magnetic resonance imaging (MRI).
- The MRI did not show any soft tissue abnormalities.
- The X-ray revealed retrolisthesis of L5 and S1.

Clinical Bottom Line

- Non surgical route of treatment allows the patient to gain strength, stability, and normal function without the risk and cost of spinal surgery
- Correct diagnosis of retrolisthesis is needed for proper therapeutic exercise and healing

Case Presentation

- Gradual onset of increasing pain over three years
- Original diagnosis after referral to a physician was “growing pain”
- Pain persisted and increased over three year span
- Increased pain while laying in the prone position, with side lying, and increased pain when running
- Sharp pain which prevented normal movement when standing



Figure 2: X-ray obtained from medical file with the permission of the patient

