

SPONDYLOLYSIS IN PREPUBESCENT FEMALE COMPETITIVE GYMNAST

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ABSTRACT: A 10-year-old female competitive gymnast with no prior medical history presented with lumbar spine pain over a one-month period. The athlete was diagnosed with spondylolysis. Spondylolysis is a stress fracture or defect of the pars interarticularis in a vertebra. This condition is common amongst gymnast due to the hyperextension activities that are constantly repeated. Since the interarticularis is small, it is unable to absorb repetitive shock, which leads to the stress fracture. It is important to recognize the signs and symptoms at an early stage and refer for a medical assessment to prevent the occurrence of spondylolysis. This case is unique because of the quick onset in the female gymnast. Recognizing signs and symptoms as soon as they occur will reduce the risk of spondylolysis and improve knowledge for both healthcare professionals and patients with the condition. In the case of prepubescent gymnasts, it is important to inform the athletes and parents of the risks of over training and properly train with exercise and stretching to help prevent spondylolysis.

Introduction

In this case report, the athlete reported to the head gymnastics coach complaining of pain in her lower back. She was instructed to push through the pain, but later her parents took her to a general physician and she was referred to a spine specialist. The MRI displayed lesions of the L4 and L5 pars interarticularis.

Purpose

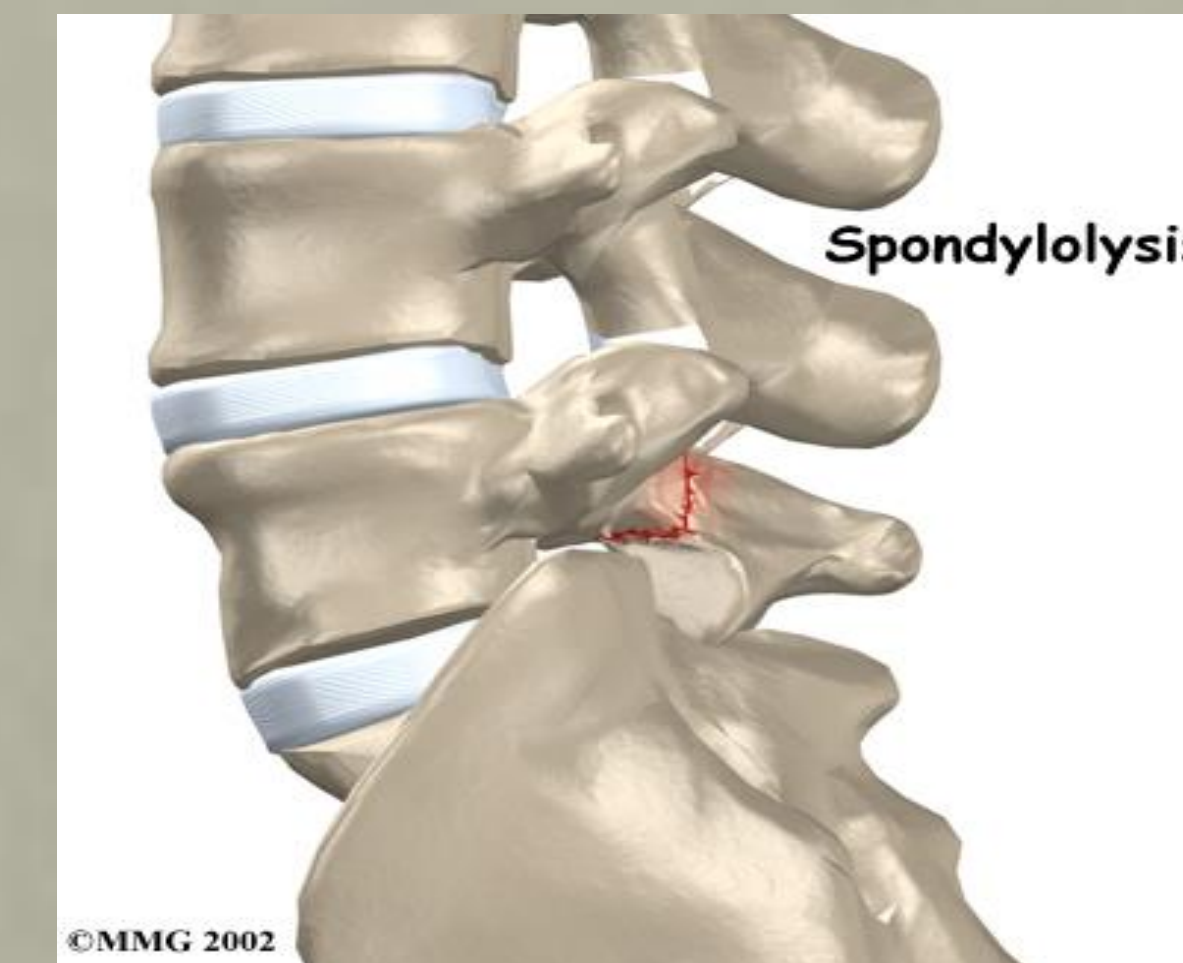
This case highlights the clinical presentation and treatment of spondylolysis in an adolescent gymnasts and creates awareness to parents and coaches about recognition of the injury. Spondylolysis is a lesion of the pars interarticularis of the vertebra. In many cases it can progress to a complete fracture.

Background

- 10-year old female
- No prior history
- Junior Olympic Gymnastics Training

Differential Diagnosis

- Spondylolysis/Spondylololysis
- SI Joint Dysfunction
- Paraspinal Muscular Strain
- Disc Herniation



Clinical Presentation

- Gradual onset of low back pain (LBP)
- Pain with flexion and extension
- There were NO obvious signs or observations

Treatment

Treatment included rest while restricting hyperextension of the lumbar spine for one month with a back brace. Physical Therapy was prescribed after one month to increase strength of the core, hips, and back muscles. A slow progression back into gymnastics for hyperextension activities such as back-walkovers was also recommended. Surgery was not necessary.



Uniqueness

This case is unique because unlike most cases, the female gymnast was able to return to sport within two months. In most cases of spondylolysis, the defect of the pars interarticularis is already large once symptoms are first present, but in this case, the gymnast knew her body (even at such a young age) and was able to be proactive about the situation to reduce healing time.



Conclusion

This case report presents the diagnosis and treatment of a common injury for the female gymnasts, yet was unique in healing. It is important as healthcare professionals to be sensitive to the complaints of a young athlete to ensure the injury doesn't worsen to spondylololysis and become debilitating or sport career-ending.