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Treatment algorithm for managing extension back pain in athletes

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Background: Extension back pain in athletes can be very challenging to manage, particularly when MRI is negative for spondylolysis and the patient is not responding to activity modification, bracing, stretching, or core strengthening. The purpose of this report is to describe the management of three athletes with extension back pain using three different treatment approaches based on a theoretical treatment algorithm.

Case description: Two male college athletes and one female high school athlete with extension back pain were treated with core strengthening, lumbar manipulation, or facet injections based on imaging results and physical examination findings.

Outcomes: All three athletes were able to return to their sports activity, at varying times (11 to 33 days), without restrictions. Pain levels measured with a numeric pain scale dropped an average of 6 points and the patient specific functional scale improved an average of 5.7 points.

Discussion: A treatment algorithm including lumbar manipulation, core strengthening, and referral for facet injections was developed by integrating current best evidence into the clinical decision making process. Variables that guide the algorithm include a positive MRI for spondylolysis, presence of fatty infiltrate of the lumbar multifidi muscle observed on MRI, reduced interfacet distance of the lower lumbar vertebral segments measured on x-ray, centralized low back pain, lumbar hypomobility with PA pressure, hip flexor tightness, aberrant motion observed with active trunk ROM, Beighton ligament laxity score >6, and a positive prone instability test. The successful outcomes of this case series support further research to evaluate the extension back pain treatment algorithm.

Biography

John Winslow is an Assistant Professor in the physical therapy program at Ithaca College, Ithaca, NY. He is a board certified Orthopaedic Specialist and Athletic Trainer. His clinical expertise is in the area of spine rehabilitation, particularly with athletes. He developed the first APTA credentialed orthopaedic physical therapy residency in NY state and continues to teach in the program. Currently he is working on predicting return to sport using radiographic assessment of lumbar facet distance and fatty infiltrate of the lumbar multifidi in athletes with extension back pain. He has developed a treatment algorithm for extension back pain that includes lumbar manipulation, core strengthening, or referral for facet injections.

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