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Piriformis syndrome: A rare cause of hip pain in a child

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Description

Piriformis Syndrome (PS) is a neuropathic pain syndrome characterized by compression or irritation of the sciatic nerve due to hypertrophy, inflammation, or anatomical variations of the piriformis muscle [1]. Although trauma, chronic microtrauma, and anatomical variations commonly cause PS in adults, pediatric cases are extremely rare, with infectious pyomyositis caused [2]. We present a unique case of non-infectious PS in a 10-year-old girl who experienced persistent right hip and lower back pain for six months, worsening with physical activity but without morning stiffness. No familial history of spondyloarthropathy or HLA-B27-associated diseases was reported. Physical examination revealed pain during right hip movement, mild enthesopathy in the right Achilles tendon, and mild tenderness around the affected region. Laboratory tests (complete blood count, CRP, ESR, ANA, RF, Anti-CCP, Anti-dsDNA) were within normal limits. Hip ultrasonography was normal. MRI revealed hypertrophy of the right piriformis muscle, with normal bilateral sacroiliac joints, confirming the diagnosis of PS (Figure 1). Treatment with Non-Steroidal Anti-İnflammatory Drugs (NSAIDs) and physical therapy led to complete resolution of symptoms by the third month. The patient's intensive volleyball training, involving repetitive movements and high physical demand, was considered a potential cause of piriformis muscle hypertrophy through chronic microtrauma. This case is unique as the first pediatric report of non-infectious PS, resembling adult primary piriformis hypertrophy. MRI is highly sensitive for diagnosing PS by accurately measuring piriformis muscle thickness [3]. Conservative management including NSAIDs, physical therapy, ultrasound-guided local steroid injections, and extracorporeal shock wave therapy are proven effective treatments [1].

In conclusion, non-infectious PS should be considered in the differential diagnosis of pediatric patients presenting with persistent hip and lower back pain. MRI is essential for diagnosis, and conservative therapy can yield favorable outcomes.

Declarations

The authors declare no competing interests.

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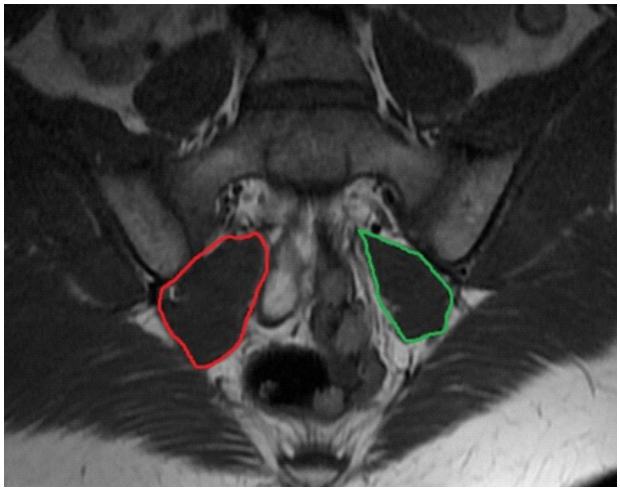

Figure 1: Coronal T1 WI MR image shows right piriformis muscle (bordered with red) is thicker than left (bordered with green). There is no pathologic signal on both muscles.

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