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Letter to the Editor

A critical factor in resistant piriformis syndrome cases: awareness of sacrotuberous ligament pain

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TO THE EDITOR

Piriformis syndrome (PS) is characterized by hip pain, sciatica, tenderness in the hip, and pain aggravated by sitting or activities in which the tension of the piriformis muscle is increased, resulting from compression of the sciatic nerve by the piriformis muscle [1]. Although specific clinical tests such as Freiburg, Pace, and Beatty are helpful in the diagnosis of PS, PS is still a diagnosis of exclusion, as there is no examination test or imaging method for a definitive diagnosis [1]. Therefore, in treatment-resistant cases, the diagnosis may need revision. The initial treatment of PS involves the use of non-steroidal anti-inflammatory drugs, behavioral modifications, and physical therapy agents. In resistant cases, local anesthetic injections, steroid injections, botulinum toxin applications, and even surgery may be required [1,2].

The sacrotuberous ligament (STL) originates from the posterior superior iliac spine, sacrum, and coccyx, and terminates medial to the ischial tubercle, playing an important role in pelvic stabilization [3]. According to a recent study, the STL has a greater role in pelvic stability than previously thought [4]. It has also been reported that the STL is closely related to the biceps femoris, gluteus maximus, and piriformis muscles, and that the upper part of the pelvic surface of the STL is connected to the piriformis muscle [5]. This suggests that the STL may be important in pathologies originating from the piriformis muscle.

The literature has frequently discussed the important role of STL, particularly in pudendal nerve entrapment syndrome and sacroiliac joint dysfunction [6,7]. Although studies examining the relationship between the STL and PS are limited, in a study examining the surgical treatment of patients diagnosed with PS, the surgical success rate of the patient group who underwent STL resection was found to be significantly higher compared to the patient group who did not undergo STL resection [5]. This has been explained by the STL, gluteus maximus muscle, and piriformis muscle forming a compartment that compresses the sciatic nerve from behind. This point of view reveals that the STL is a structure that should not be overlooked, especially in PS cases.

STL pain is one of the causes of hip pain; it sometimes

spreads to the lower extremities and mimics lumbar radiculopathy. Although there is no definitive diagnostic method, localized tenderness in the STL using ultrasonography may help the diagnosis [6]. It has been reported that physical therapy programs for STL, biceps femoris muscle, and gluteus maximus muscle relaxation, prolotherapy for STL, and local anesthetic (LA) injections can be used in the treatment of STL-induced pain [6]. Although there are studies evaluating surgical treatment for STL pain in PS [5], to the best of our knowledge, there were no studies evaluating conservative treatment or minimally invasive treatments such as plorotherapy and LA injections.

In conclusion, with this letter, we would like to raise awareness by emphasizing that STL pain should not be overlooked after the diagnosis is reviewed in refractory PS cases. We also think that there is a need for studies evaluating the effectiveness of conservative treatment and minimally invasive treatment methods for STL pain in refractory PS cases.

DATA AVAILABILITY

Data sharing is not applicable to this article as no datasets were generated or analyzed for this paper.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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