

Brief Commentary

Sacroiliac Fascial Lipocoele Could be a Neglected Cause of Lumbosacral Pain: Case Study of Percutaneous Endoscopic Treatment

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The pathological entities commonly associated with lumbosacral pain are the intervertebral discs, facet joints or surrounding muscle. However, in the absence of diagnostic confirmation of the aforementioned structures, the diagnosis may become confusing and intractable. Sacroiliac fascial lipocoele (SFL), namely, pannicular hernia, could be a neglected cause. First reported by Ficarra et al in 1952, it was highlighted by the formation of lipocoele in the sacroiliac fascia. Mostly, it could be spontaneously eliminated under conservative therapy. However, for intractable pain, surgical intervention may be the only choice. We will first present a typical case of SFL which was treated by percutaneous endoscopic surgery. Ultimately, a satisfactory outcome was achieved and maintained at 12 months follow-up.

It is important to distinguish SFL some cases with lumbosacral back pain. Detailed physical examination, superficial ultrasonography and diagnostic nerve block are extremely valuable for acquiring a precise diagnosis. Overall, when considering the clinical outcome of such cases and the foregoing benefits, percutaneous endoscopic treatment could be an efficacious alternative treatment for SFL-related lumbosacral back pain.

Key words: Lumbosacral pain, hernia, panniculitis, endoscopes, minimally invasive surgery

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A 50-year-old female patient who complained about a 6-month history of aggravating lumbosacral pain accompanied by pain radiating into her right buttock, was referred to our hospital. Physical examination showed that a round, tough, subcutaneous nodule was palpated above the right side of the upper edge of the medial iliac crest, where the concordant symptom could be replicated when pressing the nodule and be eliminated by a diagnostic nerve block of lidocaine. Ultrasonography showed a subcutaneous lipidoid echo area just above the right side of the upper edge of medial iliac crest (Fig. 1). There was no positive finding in the lumbar magnetic resonance imaging (MRI). Although the patient underwent 3 months of physical therapy and a therapeutic nerve block with the compound of betamethasone and lidocaine, the therapeutic

efficiency was only temporary and unsatisfactory.

A percutaneous endoscopic decompression was performed under local anesthesia. When an approximately 8-mm skin incision was made above the nodule, a combined dilator-sheath system of suitable size was bluntly inserted and the oval operation sheath was laid diagonally toward the lipocoele after a slight dilation followed by completely inserting the endoscope. Within the tissue space established by the continuous irrigation of 0.9% saline solution, both the hernia (Fig. 2A) and the neighboring neurovascular bundles (Fig. 2B) were then observed. After augmenting the fascial aperture (Fig. 2C), only the squirted fat tissue was excised precisely. Meanwhile, bleeding was coagulated by a bipolar radiofrequency. For better evaluating the efficacy of the neural decompression, whether the preserved neural branch was relaxed and

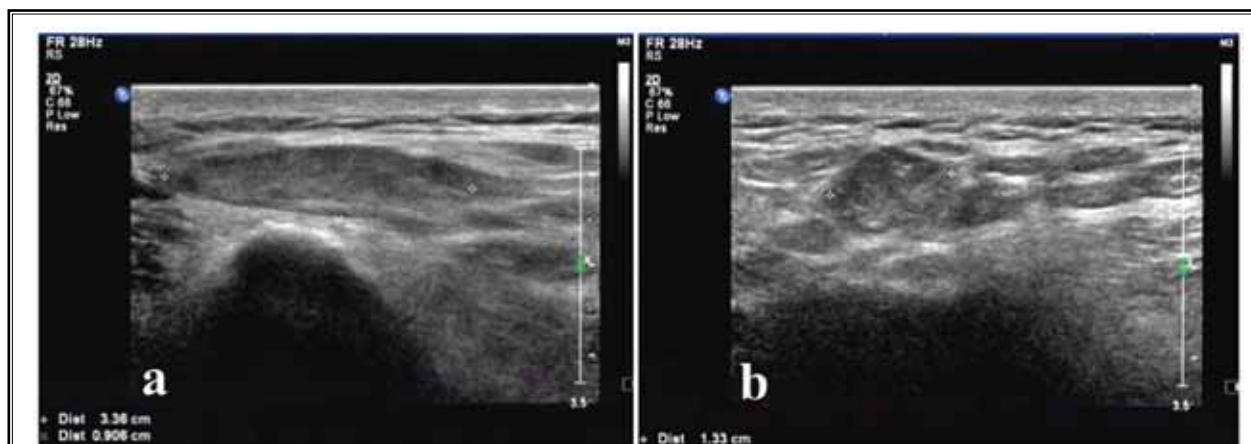


Fig. 1. Superficial ultrasonography (the sections along the long (a) and horizontal (b) axis, respectively) shows that a subcutaneous lipoid echo area on the right upper edge of the medial iliac crest is squirted.

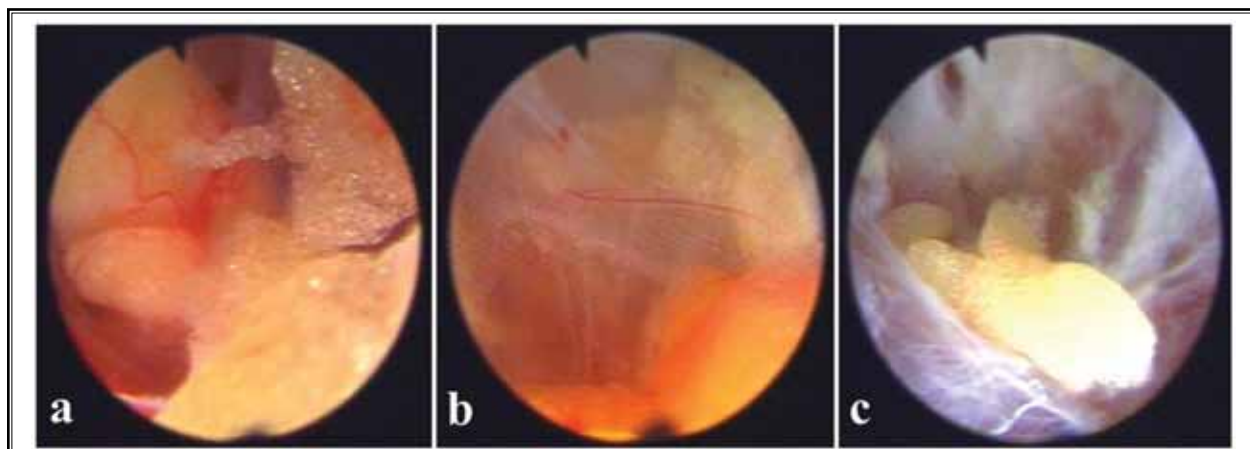


Fig. 2. Both the hernia (A) and the neighboring neurovascular bundles (B) are observed. After augmenting the fascial aperture, the deep fat tissue is squirted (C).

the symptom was relieved had been monitored during the whole surgery. Postoperatively, the visual analogue scale of lumbosacral pain was dramatically decreased from 7 preoperatively to 2 immediately after the operation. Pain was finally eliminated in 4 days postoperatively. In the 1-year follow-up, no operation-related complications or recurrences were reported.

Lumbosacral pain is commonly encountered by pain physicians and the pathological entities usually associated with it are the intervertebral discs, facet joints or surrounding muscles. However, lumbosacral pain in the absence of disturbance by the aforementioned structures is often diagnostically intractable and confusing. Sacroiliac fascial lipoceles (SFL), namely, pannicular hernia, could well be a neglected cause. First reported

by Ficarra et al in 1952 (1) and was highlighted by the formation of lipoceles in the sacroiliac fascia. Mostly, it could be spontaneously eliminated under conservative therapy. However, for intractable pain, surgical intervention may be the only choice. In the era of minimally invasive surgery, percutaneous endoscopic operation was born and bridged the gap between conservative therapy and traditional open surgery. To the best of our knowledge, this is the first case of SFL treated under endoscopy.

According to the clinical evidence and the distribution of nociceptive innervation, the branches of the superior gluteal nerve may be the pain source of this case. The possible pathogenesis is proposed as follows: the lumbosacral region is richly endowed with adipose

tissue and the lumbosacral fascia above the upper edge of medial iliac crest is relatively weak; in the condition of severe bending activities or violent contraction of neighboring muscles, the inner pressure of deep tissue is obviously increased and then the deep fat tissue is extruded from the inborn foramen or the tear of lumbosacral fascia. Besides edema, bleeding, torsion even incarceration of the lipocèle, the neighboring neural branches are also irritated by the inflammatory medium. Depending on the size of the hernia hole and its content, the severity of symptom and variation in physical sign are individually different.

In suspected SFL cases, in which the lumbosacral pain could not be explained by X-ray and MRI, superficial ultrasonography is considerably useful. Additionally, both detailed physical examination and diagnostic nerve blocks are extremely meaningful for locating the primary source of the unexplained pain and the accurate

diagnosis of SFL. SFL could be misdiagnosed as lipoma or lumbar disc herniation. Nevertheless, lipoma is usually asymptomatic. Contrarily, lumbar disc herniation is symptomatic which could be identified by physical examination (neurological sign: like positive lasèglue).

It is important to distinguish SFL from some cases with lumbosacral back pain. Detailed physical examination, superficial ultrasonography and diagnostic nerve block are extremely valuable for acquiring a precise diagnosis. Overall, when considering the clinical outcome of such cases and the foregoing benefits, percutaneous endoscopic treatment could be an efficacious alternative treatment for SFL-related lumbosacral back pain.

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