Research Article

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Herniated lumbar disc causing isolated calf tetany.

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ABSTRACT

A 46-year-old female came to a sports medicine clinic with a single complaint of increased calf soreness and cramps. This led to near-constant calf tetany. After a few reasonable Despite receiving inaccurate diagnoses, the patient was effectively treated with surgery for a herniated lumbar disc. This example emphasizes the significance of considering lumbar radiculopathy in the differential diagnosis for lower-extremity complaints, particularly in instances with unusual symptoms. We examine important literature on lumbar disc herniation, including atypical manifestations and current diagnostic and therapeutic guidelines.

Keywords : Herniated lumbar disc; Calf tetany; Achilles tendinitis; Abnormal presentation.

INTRODUCTION

Acute herniated lumbar disc often causes sudden lower back discomfort. Lumbar radiculopathy symptoms include pain, numbness, and tingling that spread throughout the body.
The dispersion of the affected nerve root may also exist. A comprehensive physical exam may indicate reduced or changed feeling in the affected dermatome, hyperreflexia, and/or aberrant reflexes, such as the Babinski sign. Chronic conditions may cause muscular weakening and atrophy.
Magnetic resonance imaging of the lumbar spine is routinely used to confirm the diagnosis.
However, unusual manifestations can happen. In addition to the situation given in this study, current literature highlights the significance of maintaining a high index.
Consider disc pathology while treating individuals with lower extremity problems. In this example, a patient with a herniated lumbar disc initially complained of calf pain, which proceeded to tetany before being diagnosed. We examine current recommendations for treating and evaluating suspected lumbar disc herniations.

CASE PRESENTATION

A 46-year-old medical office assistant visited a sports medicine clinic after experiencing soreness and cramps in her left calf for many weeks. Her previous medical Obesity, diabetes, and dyslipidemia were all present in his medical history. The patient had no past history of trauma, neurologic illness, or spinal pathology.
The patient was diagnosed with Achilles bursitis or tendinitis with a calcaneal spur and had treatment for many weeks, including oral anti-inflammatory medicines, activity restriction, and physical therapy. Several physical therapists treated her throughout this time, with the same approach.
Calf strain or Achilles tendinitis is the presumed diagnosis. The patient had treatment from a chiropractor, including electrical stimulation, ultrasound, and laser therapy for her calf.
Deep tissue massage and stretching. After ineffective therapy, the chiropractor referred the patient to an orthopedic surgery clinic due to concerns about exercise-induced compartment syndrome. As the patient's condition worsened, her principal employment, a urologist, became more concerned about her leg. The urologist suspected the patient had a Deep Venous Thrombosis (DVT) after a brief physical exam revealed significant calf tightness. However, ultrasonography was used to rule out the possibility. He hastened the orthopedic referral after the chiropractor expressed concern about probable compartment syndrome.
The patient had been experiencing problems for nearly three months before seeing the orthopedic surgeon. Her physical evaluation revealed typical light touch sensations and pulses.
However, there is tetanic contraction of the left gastrocnemius muscle. She had passive dorsiflexion up to 10 degrees beyond neutral. The woman was admitted to the hospital for further evaluation of her symptoms, with a provisional diagnosis of upper motor neuron lesion or multiple sclerosis. MRI scans of the brain, cervical spine, and thoracic spine were normal, along with a lower-extremity nerve conduction examination.A neurologist was consulted for diagnosis, and a lumbar spine MRI was ordered. The lumbar spine MRI indicated an L5-S1 neural foramina protrusion.

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Figure 1 depicts a sub-acute herniated disc with abutment and deflection of the left S1 nerve root. After consulting with a neurosurgeon, the patient underwent a minimally invasive left L5-S1 discectomy and decompression. The patient claimed instant improvement from her symptoms following surgery. Despite some calf soreness from contractions, the patient claimed relief from "tightness" in the surgery recovery room. She was On the first postoperative day, the patient was able to walk with little difficulty. On postoperative day two, she reported no calf pain and was discharged. She returned to work two weeks following the procedure. At a 2-year At follow-up, the patient reported total remission of left-sided discomfort and no complaints about the left calf.

DISCUSSION

Patients with lumbar pain may receive care from a variety of healthcare practitioners, including primary care physicians, sports medicine specialists, chiropractors, and orthopedic surgeons. Disc herniations. Despite a comprehensive history and physical exam, an uncommon appearance of a lumbar disc herniation can be missed without a high level of suspicion. This scenario highlights the challenge of accurately diagnosing a common condition when it manifests differently than expected.

Many people believe that lumbar disc herniations are caused by a specific event in their clinical history. Without a "smoking gun," it may be logical to infer that the patient suffers from a persistent, degenerative ailment like tendinitis or bursitis. Suri and colleagues studied 154 individuals with MRI-confirmed lumbar disc herniation and found that 62% The majority of patients were unable to identify a triggering incident [1. Clinical history may not necessarily lead to an accurate diagnosis.

A thorough physical exam may not detect disc herniation, according to recent research. Al Nezari and colleagues conducted a meta-analysis of over 7,000 patients and found "limited" evidence. A study found that all neurological examination components accurately detected disc herniation in patients with suspected radiculopathy [2]. All patients had disc herniation, confirmed by surgery and/or imaging (CT or MRI). Testing for sensory impairments was 32-40% sensitive and 59-72% specific.

Motor deficits were 22-40% sensitive, and 62-79% sensitive. Motor atrophy exhibited 31% sensitivity and 76% specificity. Reflex impairments were 25-27% sensitivity and 75-78% specificity. A recent study by van der Windt et al. discovered that patients with suspicious In patients with suspected lumbar disc herniation, der Windt et al. discovered that the straight leg raise test was 92% sensitive and 28% specific, whereas the crossed straight leg raise test was 90% specific and 28% sensitive [3]. The study found that muscle weakness, muscle wasting, decreased reflexes, and sensory deficits showed poor to mediocre diagnostic performance in distinguishing low back discomfort from disc herniation, particularly when performed alone.

Diagnosing a lumbar disc can be challenging due to its variety of symptoms. Herniated discs can manifest in various distinct ways. Literature (Table 1). Rapport and colleagues reported a case of a 45-year-old male with positional headache and bilateral 6th cranial nerve palsies [4]. He felt a "pop" in his back after carrying heavy objects. A cranial MRI revealed hypotension with bilateral subdural collections, whereas a lumbar spine MRI revealed a T12-L1 disc herniation with intradural fragmentation. The disc's penetration of the dural membrane generated a leak of cerebrospinal fluid, leading to cerebral hypotension. A complete Symptoms appeared after discectomy and dural defect correction.

Khalatbari and colleagues described a case of a patient with acute right lower quadrant discomfort radiating. Symptoms in the right groin within 24 hours may indicate a urinary tract infection, hernia, or other intra-abdominal pathology [5]. The patient had urine frequency, urgency, and urethral discharge. The patient previously experienced mild persistent back discomfort. The neurological and gynecological exams revealed no significant findings, with the exception of right paraspinal upper lumbar pain. A lumbar MRI revealed a herniation between the L1 and L2 discs. Discectomy provided total remission of symptoms.

Cervical or thoracic disc pathology might also appear similar to lumbar disc disorders [6-8]. One report described a 42-year-old female patient with acute flaccid left lower limb.

The patient presented with monoplegia, enhanced deep tendon reflexes in the left ankle clonus, and a positive Babinski sign (9). In addition, she had pain and hyperesthesia in the L1 dermatome and lower, as well as increased urine frequency. The rest of the physical test was unremarkable. The MRI revealed a C6-C7 disc herniation.

Several disc pieces and a dural sac that had been pierced were discovered during surgery. After disc fragment removal, discectomy, anterior cervical fusion, and dural rip closure with epidural fat graft and fibrin glue, the patient experienced immediate improvement. Left lower limb.

After diagnosing a lumbar disc, most writers suggest pursuing conservative therapy first, if applicable. While determining the actual percentage of patients Although non-operative treatment is challenging, studies suggest that up to 90% of patients can benefit from conservative therapy alone [10]. Recommendations currently include at least six weeks of treatment, which may involve reduced physical activity, NSAIDS, tramadol, or narcotic pain drugs if other treatments do not provide enough relief. Physical therapy can help with modest stretching and massage. Pain relief treatments include ultrasound, whirlpool, and ice/heat pack therapy. For patients

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who have not made significant clinical progress after 3-4 treatments.If there are evidence of growing neurological deficiency, saddle anesthesia, or bowel/bladder incontinence, it is recommended to seek urgent surgical assessment [11]. Surgical treatment can result in great clinical outcomes.
Most patients will experience this.
The patient should have received lumbar imaging sooner. The absence of lumbar pathology in the differential diagnosis of calf tetany led to "tunnel vision" among physicians, who relied solely on the presumptive diagnosis of Achilles tendinitis/bursitis.
Early lumbar imaging and consideration of neuropathology could have led to a faster diagnosis and treatment for a patient who did not recover much. Hopefully, this report will include calf tetany on the list.

CONCLUSION

This is the first report of sustained calf tetany as a symptom of lumbar disc herniation. We encourage all healthcare team members to maintain an When experiencing calf pain and cramping, it's important to have a high index of suspicion for lumbar pathology. If conservative treatment fails, diagnostic testing should be considered.

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