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Far Lateral Lumbar Disc Herniation in the Emergency Department

Adem MELEKOĞLU[1] | Ertuğrul ALTINBİLEK[1] | Burak DEMİRCİ[2] | Abuzer COSKUN[2]*

***Correspondence:** Abuzer COSKUN
Address: [1]Department Of Emergency Medicine, Şişli Hamidiye Etfal Training and Resarch Hospital İstanbul, Turkey; [2]Department Of Emergency Medicine, Bağcılar Training and Resarch Hospital İstanbul, Turkey
e-mail ✉: dr.acoskun44@hotmail.com
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ABSTRACT

Musculoskeletal disorders are a common reason for emergency department admissions. In addition to providing pain control to these patients, it is crucial to differentiate between musculoskeletal, spinal cord, abdominal, and retroperitoneal diseases. A 37-year-old female with multiple sclerosis complained of pain extending from the left groin and leg to the left knee. The patient had severe non-traumatic pain, posture and gait disturbances. In addition, paresthesia in the left thigh of the lower extremity, difficulty in flexion, and the reverse laseque test were positive. On magnetic resonance imaging, a far lateral lumbar disc herniation was found at the L3-L4 vertebral level. Twelve days after being hospitalized to the neurosurgery clinic, the patient was discharged. A patient who presented to the emergency department with multiple sclerosis and distal lateral lumbar disc herniation was evaluated in light of the relevant literature.
Keywords: *Emergency Department, Far Lateral Lumbar Disc Herniation, Pain*

Introduction

Lumbar-leg pain is one of the most common reasons for emergency room admissions. Two to three percent of emergency department admissions are due to non-traumatic low back and leg discomfort (Pitts *et al*., 2008). Patients presenting to the emergency department may exhibit extreme agitation in tandem with their pain. In addition to providing pain management for these patients, it is essential to distinguish between musculoskeletal, spinal cord, abdominal, and retroperitoneal diseases that may cause low back and leg discomfort (Edlow, 2015). In this article, we present a case of acute pain spreading from the left inguinal region and thigh to the knee.

Case

A 37-year-old female with multiple sclerosis was admitted to the emergency department with two days of symptoms of discomfort extending from the left groin and thigh to the anterior portion of the left knee. Since a month ago, the patient has experienced occasional pain from the waist to the hip. She had

postural and gait disturbances due to non-traumatic severe pain. After she was placed on the stretcher, her vital signs and physical condition were evaluated. The glasgow coma scale of the patient whose vital signs were stable was 15, respiratory sounds were normal, and abdominal examination was normal. There was no difference between the right and left arm blood pressure measurements, and the patient's distal pulses were palpable. The patient was found to have paraesthesia in the left thigh of the lower leg, flexion difficulties, and a positive reverse laseque test. A narcotic drug was administered intravenously to alleviate the patient's agony. The patient's hematological parameters were normal, severe leg pain continued. We planned lumbar MRI for the patient. On her MRI, a far lateral lumbar disc herniation was found at the L3-L4 vertebral level (Fig. 1). The patient was transferred to the neurosurgery clinic for surgical treatment.

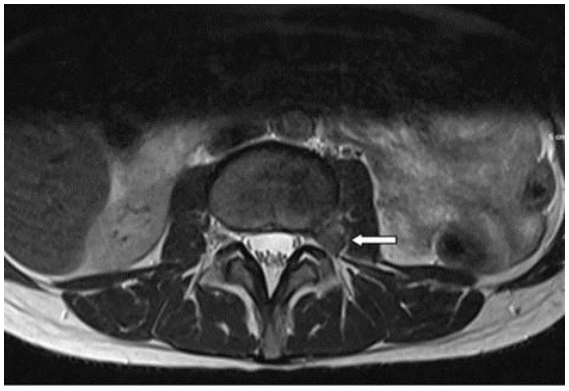

Figure 1: L3-L4 Extra Foraminal Far Lateral Disc Herniation.

Discussion

Far lateral lumbar disc hernias represent a distinct category of disc pathology that includes both intraforaminal and extraforaminal lumbar disc hernias, characterized by their distinctive clinical presentation, diagnosis, and treatment methods compared to the more common central and pericentral disc hernias (Berra *et al*., 2021) (Fig. 2). About 10% of symptomatic lumbar disc herniations are located within or lateral to the neural foramen. These intraforaminal and extraforaminal lumbar disc herniations, also known as distal lateral lumbar disc herniations, can compress the spinal nerve and dorsal root ganglion, resulting in severe, sometimes excruciating pain that frequently does not respond to conservative treatment and necessitates surgery (Berra *et al*., 2021). Our patient also experienced severe pain that was unaffected by intravenous narcotic administration. Possibly because of direct compression of the dorsal root ganglion, the pain is more intense than with central disc herniations (Epstein *et al*., 2002). In patients with far-lateral disc herniation, the femoral stretch test may be negative. The reverse laseque test was positive in our case. While MRI is the optimal imaging modality for identifying this particular disc herniation, multislice computerized tomography scanning is a viable alternative if MRI is

unavailable (Epstein *et al*., 2002). The number of patients who applied to the emergency department with the complaint of low back leg pain is high. However, surgical treatment is rarely indicated in these patients. After other acute diseases have been ruled out, patients presenting with significant leg pain that does not respond to opioids should be evaluated for a far lateral disc herniation. Surgical treatment should be considered for these patients.

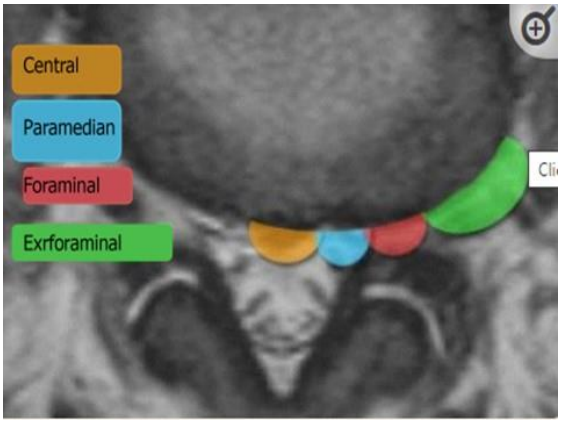

Figure 2: Lumbar Disc Herniation Zones.

Conclusion

In our case, we focused on the differential diagnosis of a patient with multiple sclerosis who developed a far lateral lumbar disc herniation. Multiple sclerosis can cause diseases that affect other systems, as evidenced in both our instance and the sample cases. In cases of extreme lateral lumbar disc herniation, clinical deterioration and severe pain are evident once more. Differential diagnosis of far lateral disc herniation from other diseases that cause severe pain in the leg is required. In such circumstances, the history, initial complaints, and duration of symptoms are crucial. In such situations, early diagnosis and treatment will be crucial.

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Ethical Approval: Written with permission from the patient and local hospital administration.

Human Rights: The study was made in following the Declaration of Helsinki for Human Research.

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