



Thoracic Disc Herniation Presenting As Visceral Pain: A Case Report

Visseral Ağrı ile Prezente Olan Torakal Disk Herniasyonu: Olgu Sunumu

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Department of Neurosurgery, Gazi University, Faculty of Medicine, Ankara, Türkiye

ABSTRACT

Thoracic disc herniation (TDH) is a rare clinical entity, accounting for less than 1% of all intervertebral disc herniations. Although it most commonly presents with axial back pain, myelopathy, or radiculopathy, TDH can occasionally manifest with atypical and misleading symptoms such as visceral or abdominal pain, significantly complicating diagnosis and potentially delaying appropriate neurosurgical intervention. We report the case of a 48-year-old woman who presented with chronic abdominal and back pain, accompanied by intermittent numbness in the lower extremities. Despite extensive prior investigations, no definitive diagnosis was established. Thoracic spine magnetic resonance imaging demonstrated a right paracentral disc herniation at the T9–10 level, causing compression of the spinal cord and adjacent nerve roots. The patient underwent a right transfacet discectomy, which resulted in complete resolution of symptoms without postoperative complications. This case highlights the diagnostic challenge of TDH presenting with atypical abdominal symptoms. Spinal imaging should be considered in patients with unexplained visceral pain, especially when neurological findings are present. Early detection can prevent unnecessary interventions and allow timely surgical treatment.

Keywords: Thoracic disc herniation, abdominal pain, atypical presentation, transfacet discectomy, radiculopathy, spinal cord compression

ÖZ

Torakal disk herniasyonu (TDH), tüm intervertebral disk herniasyonlarının %1'inden azını oluşturan nadir bir klinik durumdur. En sık aksiyel sırt ağrısı, miyelopati veya radikülopati ile prezente olmakla birlikte, bazı durumlarda visseral veya abdominal ağrı gibi atipik ve yanıltıcı semptomlarla ortaya çıkabilir. Bu durum tanıyı güçleştirmekte ve uygun nöroşirürjik müdahalenin gecikmesine neden olabilmektedir.

Kronik abdominal ve sırt ağrısı ile başvuran, alt ekstremitelerde aralıklı uyuşma şikayeti bulunan 48 yaşında kadın hasta sunulmuştur. Daha önce yapılan kapsamlı tetkiklere rağmen kesin bir tanı konulamamıştır. Torakal omurga manyetik rezonans görüntülemesinde T9–10 seviyesinde sağ parasantral disk herniasyonu saptanmış olup, spinal kord ve komşu sinir köklerine bası yaptığı izlenmiştir. Hastaya sağ transfacet diskektomi uygulanmış ve postoperatif dönemde herhangi bir komplikasyon gelişmeden semptomlarda tam düzelme sağlanmıştır.

Bu olgu, TDH'nin atipik abdominal semptomlarla prezente olabileceğini ve tanısal zorluklar oluşturabileceğini göstermektedir. Açıklanamayan visseral ağrı varlığında, özellikle nörolojik bulgular eşlik ediyorsa, spinal görüntüleme mutlaka düşünülmelidir. Erken tanı, gereksiz girişimlerin önlenmesini ve zamanında cerrahi tedaviyi mümkün kılar.

Anahtar Sözcükler: Torakal disk herniasyonu, abdominal ağrı, atipik prezentasyon, transfacet diskektomi, radikülopati, spinal kord basısı

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Address for Correspondence/Yazışma Adresi: Zeynep Balaban, Department of Neurosurgery, Gazi University, Faculty of Medicine, Ankara, Türkiye
E-mail / E-posta: zeynep.balaban@yahoo.com
ORCID ID: orcid.org/0009-0002-1995-3218

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INTRODUCTION

Thoracic disc herniation (TDH) is a rare spinal pathology, accounting for less than 1% of all intervertebral disc herniations (1). This rarity is largely due to the relative immobility of the thoracic spine (1,2). TDH most frequently affects individuals in middle-to-late adulthood and shows no clear gender predominance. The typical clinical presentation includes axial back pain, sensory deficits, signs of myelopathy, and varying degrees of lower extremity weakness (3-5). However, atypical and misleading presentations are increasingly reported in the literature.

Among these presentations, visceral pain syndromes—such as abdominal, testicular, or chest pain—pose a significant diagnostic challenge and frequently result in delayed diagnosis (6). The underlying pathophysiological mechanism is thought to involve irritation of the thoracic nerve roots, producing referred pain patterns that mimic intra-abdominal or cardiopulmonary disorders (7). For this reason, TDH should be considered in the differential diagnosis of unexplained visceral pain, especially when conventional investigations fail to identify a clear etiology.

We present a rare case of TDH in a patient who initially had chronic abdominal pain accompanied by dorsal back pain and sensory disturbances, leading to a delayed diagnosis.

CASE REPORT

A 48-year-old woman was admitted to our clinic with a one-year history of persistent back pain, abdominal discomfort, and intermittent numbness in her lower extremities. She had previously attended several healthcare centers and had been treated for various preliminary diagnoses without significant clinical improvement. Initial suspicion of *Helicobacter pylori* infection led to eradication therapy, which resulted in partial relief of her abdominal symptoms; however, her back pain remained unchanged.

As part of the differential diagnostic work-up, magnetic resonance imaging (MRI) of the thoracic spine was performed. Imaging revealed a right paracentral disc herniation at the T9–10 level, and the patient was subsequently referred to our neurosurgery department (Figure 1). Following evaluation by a multidisciplinary neurosurgical council, surgical intervention was considered the most appropriate treatment strategy.

Neurological examination revealed globally hypoactive deep tendon reflexes, except for a relatively preserved left patellar reflex. No focal motor deficits or pathological reflexes were observed. Systemic examination revealed no additional abnormalities. The patient had no history of trauma, prior surgery, or chronic medication use. Conservative treatment, including physical therapy and rehabilitation, had previously been attempted without success.

Thoracic MRI demonstrated preserved vertebral alignment and localised degenerative signal changes at multiple thoracic levels. At the T9–10 level, a right paracentral subarticular disc extrusion with inferior migration, accompanied by a diffuse annular protrusion, was identified.

Under general anesthesia, the patient was placed in a modified prone position. A midline incision and a unilateral subperiosteal dissection were performed. The right facet joint at T9–10 was removed using Kerrison rongeurs and a high-speed drill to gain access to the lateral spinal canal. A right transfacet approach was used to reach the disc space. Partial inferior laminectomy at T9, and resection of the ligamentum flavum, allowed identification and decompression of the right T10 nerve root (Figure 2). A migrated disc fragment compressing the thecal sac was removed, resulting in adequate neural decompression.

The patient experienced no postoperative neurological deficits, reported complete symptom resolution, and was discharged without complications on postoperative day two.

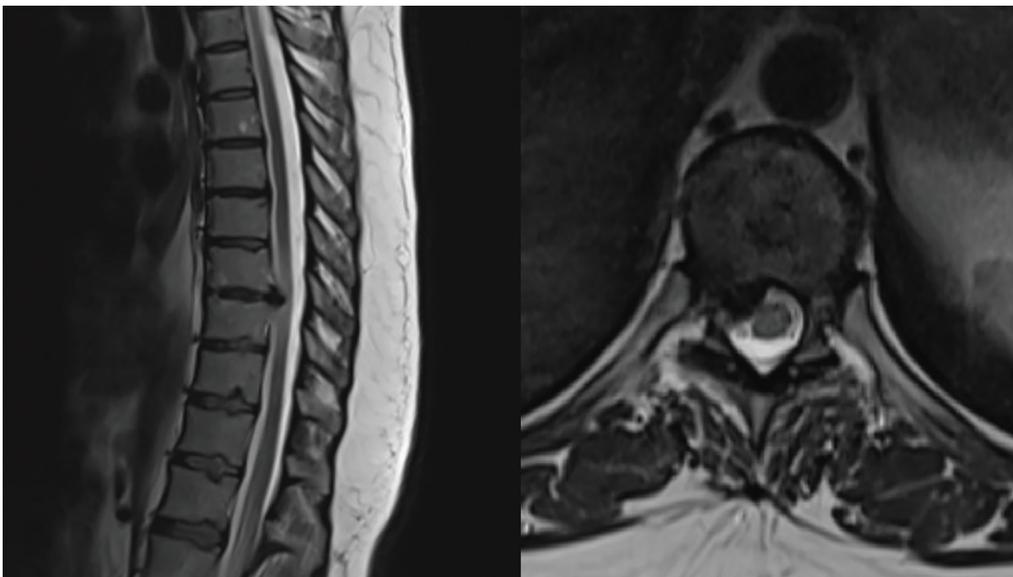


Figure 1. Sagittal and axial T2-weighted thoracic MRI demonstrating a right paracentral T9–10 disc herniation with inferior migration, resulting in anterior and anterolateral compression of the spinal cord and indentation of the descending right T10 nerve root.

MRI: Magnetic resonance imaging.



Figure 2. Postoperative sagittal and axial computed tomography images showing decompression at the T9–10 level after right transfacet discectomy.

DISCUSSION

Thoracic disc herniation is a rare spinal pathology, accounting for less than 1% of all intervertebral disc herniations (1,2). Although pain is the most common presenting symptom, its character and distribution can vary widely, ranging from localized axial back pain to radicular pain radiating to the chest or abdomen (1). While radiculopathy is frequently observed in TDH, its occurrence as an isolated symptom is extremely rare (1,4). According to Nishimura et al., only a limited number of cases have been reported in which TDH presented exclusively with radicular symptoms, such as abdominal pain or abdominal muscle weakness (8).

Atypical presentations of TDH—including abdominal, groin, testicular, or cardiac-like chest pain—can mimic gastrointestinal, genitourinary, cardiopulmonary, or even psychiatric conditions (9). This often leads to extensive and sometimes invasive diagnostic investigations before a spinal etiology is considered. Some patients have undergone unnecessary procedures, including diagnostic laparoscopy, due to misattribution of symptoms. It has been suggested that up to 10% of patients presenting with chronic idiopathic abdominal pain may have an undiagnosed thoracic disc herniation (10). Pérez Lara et al. reported that approximately 66% of patients with chronic unexplained abdominal pain were found to have a herniated disc on MRI (11).

In this case, the patient was initially misdiagnosed and treated for *Helicobacter pylori* infection, resulting in only partial symptom relief. This emphasizes the importance of including thoracic spinal pathology in the differential diagnosis of chronic abdominal pain, particularly when routine gastrointestinal evaluations are inconclusive. Differential diagnoses should include gastrointestinal disorders, cardiopulmonary diseases, and genitourinary pathologies.

Radiologically, thoracic disc herniations can be classified into five types according to size and location: Type 0 (small, <40% canal compromise, without neural compression); Type 1 (small, paracentral), Type 2 (small, central), Type 3 (large, >40%, paracentral), and Type 4 (large,

central) herniations (5). This classification assists in determining the most appropriate surgical approach. Posterolateral approaches—including transfacet, transpedicular, and costotransversectomy techniques—are generally preferred for lateralised or paracentral soft herniations, whereas anterior or transthoracic approaches are more suitable for central or calcified lesions (12-14).

In this case, a right transfacet approach was preferred due to the paracentral and lateralized nature of the soft disc herniation without significant calcification. Alternative posterior approaches, such as transpedicular or costotransversectomy techniques, were not selected because they would have required more extensive bone removal and would have carried a higher risk of postoperative spinal instability. Anterior or transthoracic approaches, although effective for large central or calcified thoracic disc herniations, were considered unnecessarily invasive for this lesion and were associated with increased cardiopulmonary morbidity. Therefore, the transfacet approach provided sufficient exposure and safe decompression, with minimal tissue disruption.

Surgical intervention should be reserved for patients with persistent pain, progressive neurological deficits, or myelopathy refractory to conservative treatment (15). Conservative management remains the first-line treatment for most patients with uncomplicated thoracic disc herniation.

CONCLUSION

Thoracic disc herniation is a rare but important cause of atypical visceral pain that can easily be overlooked. This case highlights that thoracic spinal pathology should be considered in patients with persistent, unexplained abdominal pain, particularly when subtle neurological findings are present. Early recognition and appropriate spinal imaging are crucial to avoid unnecessary diagnostic procedures and delays in treatment. Increased awareness of such atypical presentations allows for timely surgical intervention, leading to complete resolution of symptom and the prevention of potentially irreversible neurological deficits.

Footnotes

Authorship Contributions

Design: Z.B., Data Collection or Processing: C.S., N.G., Analysis or Interpretation: Z.B., A.K., Literature Search: Z.B., Writing: Z.B.

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