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CASE REPORT

SACRAL STRESS FRACTURE IN GERIATRICS: A CASE REPORT

ABSTRACT

The diagnosis of sacral stress fractures in geriatrics is often neglected because of lumbar pains and referred pains. We report regarding a 67-year-old woman who complained of chronic back pain and right hip pain that persisted despite analgesic therapy. Flexion-abduction-external-rotation (FABER), Gaenslen's, and Scour test were positive on the right side of the patient's examination, but squish test was not. The patient's neurologic examination was normal. Although computed tomography and X-rays of the hip and lumbosacral areas revealed no obvious pathology, sacral stress fracture was diagnosed using magnetic resonance imaging, which was performed because of the patient's chronic pain. This report aimed to draw attention to low back and hip pains in geriatrics because of probable sacral stress fractures and to emphasize on the importance of available radiological modalities for an accurate diagnosis.

Key words: Geriatrics; Fractures, Stress; Magnetic resonance imaging;

OLGU SUNUMU

GERİATRİK SAKRUM STRES KIRIĞI; BİR OLGU SUNUMU

Öz

Geriatric yaş döneminde görülen sakral stres kırıkları bel ağrıları ve yansıyan ağrılar nedeniyle tanıda ihmal edilen karmaşık bir durum olarak görülür. Bu çalışmada, bu dönemde bel ve sağ kalça ağrısı olup analjezik tedavisi ile ağrısı geçmeyen 67 yaşında kadın hasta değerlendirildi. Hastanın yapılan muayenesinde fleksiyon-abdüksiyon eksternal rotasyon (FABER), Gaenslen, ve Scour testi sağda pozitif; fakat squish testi negatif değerlendirildi. Hastanın nörolojik muayenesi normal olarak değerlendirildi. Çekilen lumbosakral ve kalça röntgenleri ve Bilgisayarlı Tomografisinde (BT) belirgin patoloji izlenmedi. Hastanın ağrılarının devam etmesi sonucu çekilen Manyetik Rezonans Görüntülerinin (MRG) incelenmesi sonucunda sakral stres kırığı teşhisi kondu. Bu çalışmanın amacı, geriatric dönemdeki bel ve kalça ağrısının dikkate alınması gerektiği ve sakral stres kırıklarının olabileceğine dikkat çekmek ve kesin tanı açısından radyolojik bütün modalitelerin kullanılmasını gerekliliğinin vurgulanmasıdır.

Anahtar sözcükler: Geriatric; Sakral stres kırığı; MRG

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INTRODUCTION

Sacral stress fractures, initially described by Lourie in 1982, results from a normal load on a weakened bone that has reduced elasticity. Although considered a rare cause of low back pain, sacral stress fractures are overlooked because of the lack of specific symptoms (1). Diagnosis of a sacral stress fracture is either delayed or misdiagnosed because of less awareness regarding its clinical entity (2).

Sacral insufficiency fracture, a stress fracture subtype, occurs as a result of exposure of bones with reduced mineralization and elasticity to withstand normal load (3).

Because of hormonal influences and mechanical stresses, the body undergoes some hormonal and anatomical changes during menopause, osteoporosis, and the geriatric period. These changes lead to musculoskeletal pains such as low back and hip pains (4, 5).

Magnetic resonance imaging (MRI) has a high sensitivity in revealing bone marrow edema at a fracture line, which is distinct from metastases. Bone marrow edema caused by inflammation at the fracture line appears hypointense on T1-weighted MRI sequences and hyperintense on T2-weighted MRI sequences; however, the fracture line is hypo- or isointense on T2-weighted MRI sequences (2).

CASE REPORT

A 67-year-old female patient with complaints of low back pain was given a preliminary diagnosis of lumbar disc herniation. The patient was unable to sustain any weight bearing with the right limb. No findings of neurological abnormalities were found during the clinical investigation. The patient reported tenderness over right paraspinal muscle and over the right superior gluteal region and pain during palpation at right sacral and iliac compression. She complained of a localized pain that stretched out from the right hip to the right sacral area. She was unable to identify a specific traumatic event or movement when the pain first manifested itself. Lumbar computed tomography (CT) and MRI examinations revealed no pathology; therefore, the patient was administered analgesics and anti-inflammatory medications. She was referred to our clinic because of ongoing complaints. She

stated that her pain increased with activity and decreased with rest and that she had no incontinence, numbness, or tingling in the legs and no history of trauma. Flexion-abduction-external-rotation (FABER), Gaenslen's, and Scour test were positive on the right side of the patient's examination, but squish test was not. She had no endocrine (such as hypogonadism, hyperthyroidism, and hyperparathyroidism), tumoral (such as multiple myeloma), or metabolic (including diabetes mellitus) diseases, which generally cause decreased bone mass by affecting bone metabolism, and she had no history of drug use, which are known to cause osteoporosis. Performed examinations were evaluated, and sacral MRI was performed. Evaluations of the T1- and T2-weighted axial and coronal sections of her MRI led to a definitive diagnosis of a sacral stress fracture (Figures 1-4).

DISCUSSION

Diagnosing sacral stress fractures is challenging and is often overlooked, leading to delayed and/or improper treatments and eventually, to the application of improper/inappropriate and invasive diagnostic processes (6). Furthermore, prolonged diagnostic processes delay recovery and result in the emergence of harmful effects of immobilization by reducing the likelihood of early rehabilitation (7). Sacral stress fractures can cause severe low back pain, and thus, should be considered in differential diagnosis of low back pain in elderly patients with no history of trauma. This case report aimed to emphasize on the importance of accurately diagnosing low back and hip pains in geriatric patients and to draw attention to probable sacral stress fractures, despite being rare. MRI or CT and/or bone scintigraphy should be performed in patients with suspected sacral stress fractures. MRI is the most sensitive screening method and is considered as the gold standard for diagnosing sacral stress fractures (8). MRI usually provides a diagnosis (9). We believe that this case report will increase the awareness regarding sacral stress fractures in geriatrics and will be helpful in determining the most accurate diagnostic method.



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