

A femoral abscess in a paraplegic patient: a case report

Paraplejik bir hastada femoral apse: olgu sunumu

Yeşim Özge GÜNDÜZ GÜL^{1*} Zeynep KIRIÇ ÜNAL² Ece ÜNLÜ AKYÜZ²

¹Ankara Pursaklar State Hospital, Department of Physical Medicine and Rehabilitation, Ankara, Türkiye

²Ankara Etlik City Hospital Physical Medicine and Rehabilitation Hospital, Department of Physical Medicine and Rehabilitation, Ankara, Türkiye

*Sorumlu Yazar / Corresponding Author, E-mail: ozgeyesimgunduz@gmail.com

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ABSTRACT

In patients with spinal cord injury, complications such as spasticity and pressure sores can be observed, as well as rare complications such as femoral abscess. When the main treatment method of neurogenic bladder management, clean intermittent self catheterization, is applied irregularly, there is an increase in the risk of infection, and the sensory deficit seen in these patients can delay the diagnosis and treatment process. This leads to additional complications secondary to urinary tract infections. In this case, we discuss a femoral abscess detected in a 34-year-old paraplegic patient who presented with a long-standing swelling in the right proximal femur.

Keywords: Spinal cord injury, complications, abscess

ÖZET

Omurilik yaralanması olan hastalarda spastisite ve bası yaraları gibi komplikasyonların yanı sıra femoral apse gibi nadir komplikasyonlar da görülebilir. Nörojenik mesane yönetiminin ana tedavi yöntemi olan temiz aralıklı kate-terizasyon düzensiz uygulandığında enfeksiyon riski artar. Bu hastalarda görülen duyuşal eksiklik tanı ve tedavi sürecini geciktirebilir. Bu da idrar yolu enfeksiyonuna bağı ek komplikasyonlara yol açar. Bu vakada, sağ proksimal femurda uzun süredir devam eden şişlik şikayetiyle gelen 34 yaşında paraplejik bir hastada tespit edilen femoral apse tartışılacaktır.

Anahtar Kelimeler: Spinal kord yaralanması, komplikasyon, apse

INTRODUCTION

Many complications such as cardiovascular, gastrointestinal, genitourinary, skin, musculoskeletal, neurological, endocrine, reproductive systems, and sexual functions disorders and pain, spasticity, and psychiatric problems may occur after spinal cord injuries (1). In addition to general complications, rare cases of femoral abscess due to urinary tract infections have also been reported (2). In this case, a femoral abscess in a paraplegic male patient will be presented.

CASE

A thirty-four-year-old male patient with no known comorbidities or regular medication had paraplegia (T7 ASIA A) due to a traffic accident thirteen years ago. A thigh X-ray imaging (Figure 1) and contrast-enhanced right thigh MRI (Figure 2) were requested from the patient who applied to the Orthopedics and Traumatology Department with a long-standing complaint of palpable swelling in the proximal right femur. In the evaluation of the blood samples taken, white blood cell count was found to be $9,31.103/\mu\text{L}$ ($3,57.103/\mu\text{L}$ - $11,01.103/\mu\text{L}$), neutrophil count was $5,32.103/\mu\text{L}$ ($1,69.103/\mu\text{L}$ - $7,50.103/\mu\text{L}$), lymphocyte count was $3,19.103/\mu\text{L}$ ($0,88.103/\mu\text{L}$ - $2,89.103/\mu\text{L}$), eosinophil count was $0,09.103/\mu\text{L}$ ($0,03.103/\mu\text{L}$ - $0,48.103/\mu\text{L}$), C-reactive protein level was 3.01 mg/L ($<5\text{ mg/L}$) and erythrocyte sedimentation rate was 2 ($<20\text{ mm/h}$). Following the trucut biopsy performed by the Orthopedics and Traumatology clinic from the right vastus lateralis with the diagnosis of femoral abscess, 0.3 cc volume multi-piece creamy brown tissue samples, mostly in the form of fragments, were studied with desmin and myoD1, and the pathology result was reported as compatible with degenerated muscle fibers. Then, the collection area was drained. Vacuum-assisted closure (VAC) dressing was applied. It was learned that *Candida glabrata* grew in the abscess culture. The infectious Diseases Department was consulted and 400 mg intravenous (IV) fluconazole followed by $1 \times 200\text{ mg}$ iv for 5 days, and then 200 mg/day oral fluconazole for 7 days was planned for discharge. Meanwhile, the repeated VAC dressing was renewed and the wound was debrided. When the wound healing was completed, the wound was closed.

The patient, who was treated for abscess, was consulted to us for a routine annual evaluation for neurogenic bladder. He was mobilized with a wheelchair. He was performing clean intermittent self-catheterization (CISC). Blood, urine and urodynamic tests were ordered for the evaluation of the neurogenic bladder and the patient was scheduled for re-evaluation at the PMR outpatient clinic.

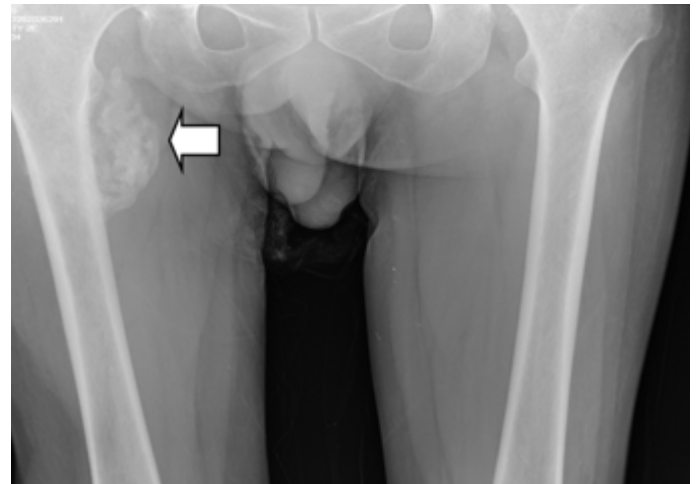


Figure 1. Right femur X-ray which presents abscess lesion on right femur proximal



Figure 2. Right femur MRG which presents abscess lesion on right femur proximal

DISCUSSION

Many disorders and complications may be encountered in patients with spinal cord injury, both in the early and late periods. Urinary system complications are also frequently seen in patients with spinal cord injury. To prevent complications, the main treatment method used in neurogenic bladder management, both in the early and late periods, is CISC. Although the introduction of CISC helps to reduce chronic urinary tract infections, it has been reported that irregular CISC practices increase the frequency of infections, especially (3). Also, sensory disorders in these patients may cause delays in diagnosis and treatment. Thus, it simplifies other complications caused by urinary tract infections (2). The most frequent complication of CISC is urinary tract infections, as well as other infective complications are pyelonephritis, prostatitis, urethritis, epididymal-orchitis, and urosepsis (4). Also, Deck et al. (2) presented four patients with neurologic dysfunction developed perinephric abscesses secondary to urinary tract infections. Complete spinal cord injury and loss of sensation may have made the diagnosis of urinary tract infection difficult in our patient.

The studies showed bladder tissue, which has wall disintegrate by inflammation and infection of patients with neurologic dysfunction, could be easily necrosed by CISC, etc., traumas (4).

Moreover, studies showed occult maxillary sinusitis secondary to obstructed sinus drainage due to mucosal irritation via nasogastric tube replacement, nasotracheal intubation, nasal congestion, or supine position in acute tetraplegic patients (5). In our patient, CISC could have eased the dissemination of infection as CISC may have eased injury of inflamed bladder tissue secondary to urinary tract infection.

Candida glabrata is a pathogen that can be found in human flora. Recent studies have shown that it is a significant pathogen in urinary tract infections, neonatal fungemia, and immune-suppressed patients (6). In our case, we suppose the main source of the pathogen is urinary tract infection, considering the patient's age and absence of comorbidities that can cause immune-suppression.

In conclusion, when proximal femoral swelling is felt in a patient with spinal cord injury, femoral abscess should be considered among other complications and urinary tract infection should be investigated.

Ethics Committee Approval: It is a case report and does not require ethics committee approval. Written informed consent was obtained.

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