FİZİKSEL TIP VE REHABİLİTASYON BİLİMLERİ DERGİSİ
Journal of Physical Medicine and Rehabilitation Sciences

LETTER TO THE EDITOR EDİTÖRE MEKTUP

DOI: 10.31609/jpmrs.2024-105340

Unusual Presentation of Heterotopic Ossification in a Hemiplegic Patient

Hemiplejik Bir Hastada Heterotopik Ossifikasyonun Alışılmadık Sunumu

Nazlı KARAMAN[a], Zeliha ÜNLÜ[b], Tolga Oğuz KARAPINAR[b]

[a]Bigadiç State Hospital, Clinic of Physical Medicine and Rehabilitation, Balıkesir, Türkiye
[b]Celal Bayar University Faculty of Medicine, Department of Physical Medicine and Rehabilitation, Manisa, Türkiye

Heterotopic ossification (HO) is a complication involving the progressive formation of mature lamellar bone in the extraskeletal soft tissue and is frequently encountered in rehabilitation clinics.[1,2] The etiology of HO can be generally categorized into two groups. Neurogenic HO is associated with central nervous system disease or injury and is frequently seen in patients with traumatic brain and spinal cord injuries, whereas traumatic HO can occur after fractures, muscle trauma, arthroplasty, and burns.[3] The incidence of neurogenic HO is between 10% and 20%.[1] HO is rare in patients with stroke, with a prevalence varying between 0.5% and 1.2%.[2]

A 53-year-old woman with left hemiplegia following cerebral hemorrhage was admitted for rehabilitation. She had partial dependency in daily activities and experienced spasticity, with Brunnstrom recovery stages of 3 for the upper limb, 4 for the hand, and 4 for the lower limb. She also suffered from diffuse left shoulder pain and hand edema, leading to a diagnosis of Stage 1 complex regional pain syndrome. After a left suprascapular nerve block, her pain and edema subsided, but she developed localized pain in the left antecubital region. Imaging of the left elbow shows HO and signs of myositis ossificans. Due to high creatinine levels, indomethacin was not administered, and surgery was not recommended. Stretching exercises were limited due to pain and non-cooperation, so proper joint positioning and follow-up were advised.

HO after stroke is very rare and has been reported in a few cases in the literature.[4,5] The true etiopathogenesis of HO is unknown. It is assumed that immobilization and difficult manipulation to maintain range of motion are the major etiologic causes.[5] In our case, immobilization and spasticity may have caused the development of HO. Bisphosphonates and nonsteroidal anti-inflammatory drugs (such as indomethacin and ibuprofen) can be used in the treatment or prophylaxis of HO, but there is no

TO CITE THIS ARTICLE:
Karaman N, Ünlü Z, Karapınar TO. Unusual Presentation of Heterotopic Ossification in a Hemiplegic Patient. Turkiye Klinikleri Journal of Physical Medicine and Rehabilitation Sciences. 2025;28(1):112-3.

Correspondence: Nazlı KARAMAN
Bigadiç State Hospital, Clinic of Physical Medicine and Rehabilitation, Balıkesir, Türkiye
E-mail: naz_cakl@hotmail.com

Peer review under responsibility of Journal of Physical Medicine and Rehabilitation Science.

Received: 01 Sep 2024 ***Accepted:*** 24 Oct 2024 ***Available online:*** 08 Nov 2024

consensus on which drug should be used and when treatment should start. In our patient, medical treatment could not be provided because of impaired renal function and nephrotoxic drug restrictions. Radiotherapy is one of the recommended treatment options for the prophylaxis and treatment of HO, but this option was not considered in our patient because of impaired cooperation.[3]

HO after stroke is a rare condition. Malposition or strains, particularly during or after intensive care unit admission, may be the etiology. Furthermore, there may be a higher predisposition in patients with hemorrhagic stroke, as in our case. HO should be considered in the etiology of upper extremity pain and limitations in patients with hemorrhagic stroke.

REFERENCES

1. Sun E, Hanyu-Deutmeyer AA. Heterotopic Ossification. 2023 Jul 31. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024. [PubMed]
2. Kim Y, Lee SJ, Choi E, et al. The effect of extracorporeal shock wave therapy on large neurogenic heterotopic ossification in a patient with pontine hemorrhage: a case report and literature review. Medicine (Baltimore). 2022;101:e31628. [Crossref] [PubMed] [PMC]
3. Shehab D, Elgazzar AH, Collier BD. Heterotopic ossification. J Nucl Med. 2002;43:346-53. [PubMed]
4. Ozen S, Bölük Şenlikci H, Ümit Yemişci O. Post-stroke bilateral heterotopic ossification: an acute problem with long-lasting consequences. Jt Dis Relat Surg. 2020;31:386-9. [Crossref] [PubMed] [PMC]
5. Kocaağa Z, Bal S, Gurgan A. Hemiplegia and heterotopic ossification on the non-paretic extremity: a case report. J Rehabil Med. 2007;39:500-2. [Crossref] [PubMed]