

# Unusual Presentation of Heterotopic Ossification in a Hemiplegic Patient

## Hemiplejik Bir Hastada Heterotopik Osifikasyonun Alışılmadık Sunumu

<sup>id</sup> Nazlı KARAMAN<sup>a</sup>, <sup>id</sup> Zeliha ÜNLÜ<sup>b</sup>, <sup>id</sup> Tolga Oğuz KARAPINAR<sup>b</sup>

<sup>a</sup>Bigadiç State Hospital, Clinic of Physical Medicine and Rehabilitation, Balıkesir, Türkiye

<sup>b</sup>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 extraskelletal soft tissue and is frequently encountered in rehabilitation clinics.<sup>1,2</sup> The etiology of HO is 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.<sup>3</sup> The incidence of neurogenic HO is between 10% and 20%.<sup>1</sup> HO is rare in patients with stroke, with a prevalence varying between 0.5% and 1.2%.<sup>2</sup>

A 53-year-old woman with left hemiplegia following a 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 receiving a left suprascapular nerve block, her pain and edema subsided, but she developed localized pain in the left antecubital region. Imaging revealed HO in the left elbow and signs of myositis ossificans. Due to high creatinine levels, indomethacin treatment was not initiated, 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.<sup>4,5</sup> The true etiopathogenesis of HO is unknown. It is assumed that immobilization and difficult manipulations to maintain range of motion are the major etiologic causes.<sup>5</sup> In our case, immobilization and spasticity may have caused HO to develop. 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 consensus on which drug should be used and when treatment

**Correspondence:** Nazlı KARAMAN

Bigadiç State Hospital, Clinic of Physical Medicine and Rehabilitation, Balıkesir, Türkiye

**E-mail:** naz\_cakl@hotmail.com

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should start. In our patient, medical treatment could not be given because of impaired renal function and nephrotoxic drug restrictions. Radiotherapy is one of the recommended treatment options in the prophylaxis and treatment of HO, but this option was not considered in our patient because of impaired cooperation.<sup>3</sup>

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

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