P 2-135

ESWT to Treat Refractory Neurogenic Heterotopic Ossification in Patien with Spinal Cord Injury

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Abstract

Neurogenic heterotopic ossification (NHO) is a common complication in central nervous system injuries including spinal cord injury (SCI), and significant pain can reduce the quality of life. Here, we reported the case of a 55-year-old male with C4 [S(C7/C7), M(C4/C4)] ASIA Impairment Scale A SCI due to cervical myelopathy, who experienced painful NHO around the right hip joint. His pain had been treated with medications (aceclofenac 100mg twice a day and disodium etidronate 600mg once a day) and physical modalities during a minimum of 3 weeks, however, he still exhibited severe pain with a Numeric Pain Rating Scale score of 7 to 8. In addition, because of his severe pain, he could not sit on the wheelchair at all. Ultrasound-guided extracorporeal shock wave therapy (ESWT) was administered to the area of NHO a total of 7 times, intensity of 6-7, weekly. After treatments, his pain reduced to VAS 3 and he also could sit on wheelchair more than 10 hours, although the size of NHO remained unchanged. In addition, these therapeutic effects of ESWT for NHO lasted for 6 months. To the best of our knowledge, this is the first Case report for treatment of NHO using ESWT in patients with SCI. Therefore, the application of ESWT would constitute a possible alternative to other treatment techniques for treatment of NHO in patients with SCI.

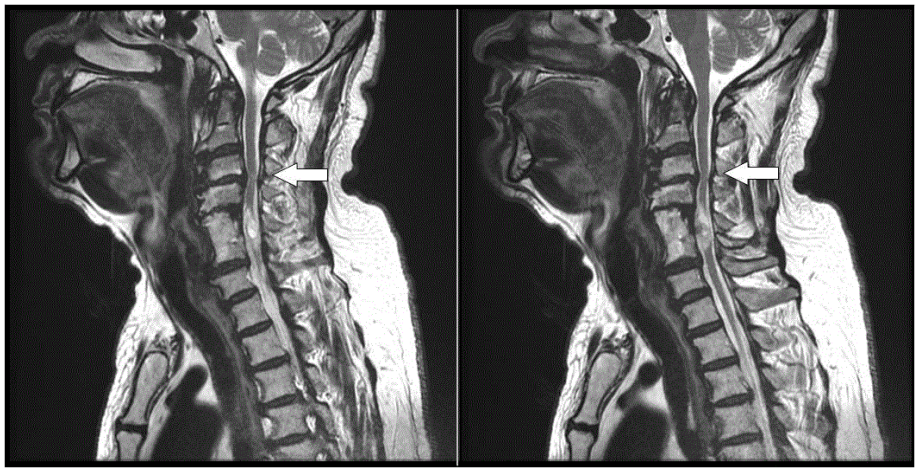

Figure 1 Sagittal T2 magnetic resonance image demonstrating spinal cord injury with focal high signal intensity spinal cord lesion

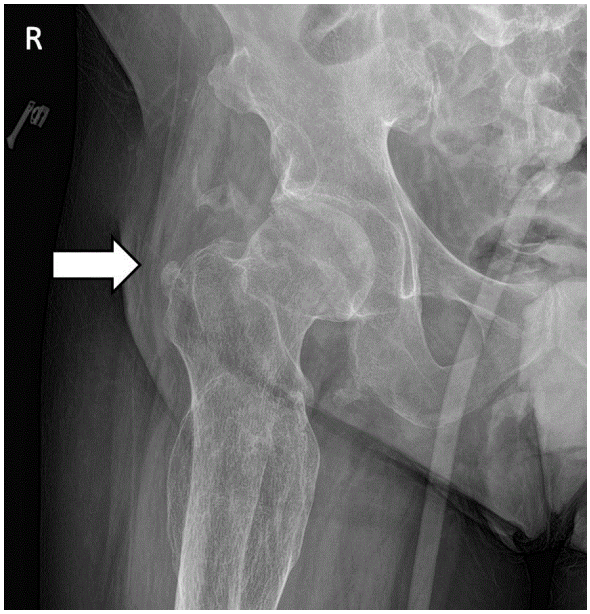

Figure 2 Radiograph of the hip showed neurogenic heterotopic ossification before extracorporeal shock wave therapy treatment