

Extracorporeal shockwave treatment of osteonecrosis of the femoral head in systemic lupus erythematosus

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Device and producing company:

OssaTron orthotripter (HMT, Kreuzlingen, Switzerland)

Introduction:

Patients with systemic lupus erythematosus (SLE) often developed osteonecrosis of the femoral head (ONFH) due to corticosteroid administration. Shockwave treatment was shown effective in ONFH. This article reported a case of SLE with ONFH successfully treated with shockwaves.

Methods:

A 19-year old-female was treated for SLE for 2 years with dexamethasone. Her medical history was complicated by thrombocytopenia. She was functionally disabled and unable to attend school regularly due to bilateral hip necrosis, stage III on x-rays and MRI. She received shockwave treatment to both hips in 2002. The source of shockwaves was from an OssaTron (Sanuwave). A total of 4000 impulses were delivered to the affected femoral head.

Results:

The last examination at 5 years showed that both hips had no pain during activities of daily living. She was able to attend school regularly. MR images showed substantial reduction in bone marrow edema and no further collapse of the lesion.

Discussion:

Mont et al recommended that core decompression should not be performed in SLE patients with stage III ONFH because THA is inevitable in 14 months. In our case, no further collapse of the lesions was noted 5 years after shockwave treatment despite the existence of stage III lesions preoperatively. Shockwaves may provide an analgesic effect, alter the vascularity of the femoral head, improve blood supply and restore the hip.

Conclusion:

Shockwaves may have the potential to curtail the progression of osteonecrosis and to delay the need for THA in very young patients who have contracted SLE.