

# Effectiveness of Shock Waves in Bone Marrow Edema Syndrome of the Hip: new Cases and More Pathogenetic Hypothesis

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"Bone Marrow Oedema Syndrome of the Hip" (BMESH) is a painful syndrome of still unknown origin. The aim of our study was to examine the efficacy of Extracorporeal Shock Waves (ESW) in rapidly relieving this condition and to underline some important biological implications.

A total of 110 patients, affected by BMESH, were subjected to high energy ESW (1 - 2 series of 2 - 3 treatments; 3,000 - 4,000 shocks; 0.3 - 0.6 mmJ/mm<sup>2</sup>). After treatment, patients went on crutches for approximately 25 - 30 days. Patients were evaluated before and after treatment by Visual Analog Scale for pain and by MRI imaging for bone marrow oedema.

ESW showed to have rapid positive effects in almost 80% of the patients, with regard to both pain and bone marrow oedema. Few patients showed aseptic osteonecrosis of the femoral head after bone marrow oedema resolution. No local nor general side effects were recorded after ESW.

BMESH, according to some of the authors, if it persists, may produce aseptic osteonecrosis of the femoral head. It can have spontaneous resolution, but it takes many months. Medical and surgical therapies are reported to be effective, but take a relatively long time as well. From our study, ESW seems to be a valid, safe, non-invasive tool in rapidly relieving BMESH. Moreover, on the basis of clinical data, the authors are going to propose ESW as first therapeutic choice, due to the potential protective effect against further vascular impairment and irreversible tissue damage.