

Hyperbaric oxygenotherapy in the grade II of avascular femoral head necrosis - case report

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A female patient (52), reported to physiatrist examination with localized pain in the areas of right hip, buttock and great trochanter, which would exacerbate with weight bearing. Symptoms were diagnosed by orthopaedic surgeon as bursitis, and inefficiently treated with local injections of Depo-Medrol. Rheumatologist ruled out inflammatory connective tissue disease. At the first examination in our Department of physical medicine the patient was mobile with two crutches, without any contact of the right foot with the floor. The patient had similar symptoms twice - before 20 years and 6 years, during intensive exercise. In the last week the pain propagated from the groin area till the knee. Diagnostic measurement revealed painful limitation of flexion 0/90°, rotations (internal 0/30°, external 0/25°). Great trochanter was painful (VAS scale of pain 8/10) and sacroiliac joint (VAS 3/10). She was prescribed for high intensity laser therapy (HILT) and ultrasound therapy (1,0 W/cm²). After ten sessions pain in the trochanteric region was VAS 4/10, while pain in the SI-joint caesed. The patient still suffered pain with weight bearing. Ultrasound of the hip showed significant effusion. Magnetic resonance imaging depicted ischemic lesion of the entire head and neck of right femur with oedema and slight aplation of femoral head and subchondral fracture (Ficat scale II).

Avascular necrosis of the bone was diagnosed, and patient was referred to hyperbaric oxygenoteraphy (HBOT), two month after symptoms. After 40 HBOT treatments the mobility of the right hip was fully restored, and the pain subsided. Control MRI showed complete regression of ischemic lesions, six weeks after. Six month later on control examination patient reported absence of any symptoms. Biophysical modalities ESWT, bisphosphonate, anticoagulants and vasodilators have demonstrated questionable efficacy in reducing pain and delaying disease progression in early stage of osteonecrosis. HBOT showed positive clinical experience in this case report.