

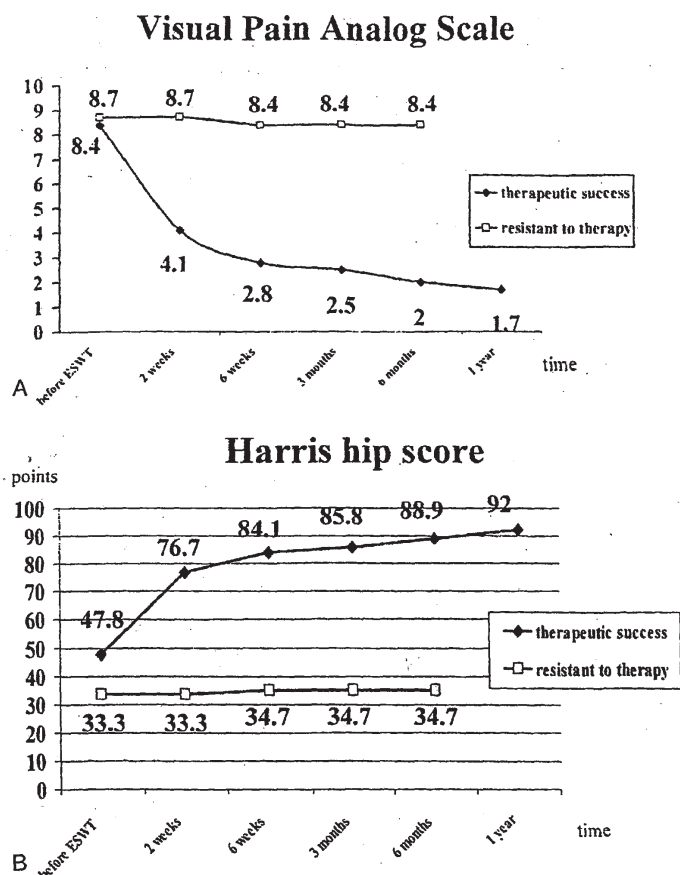
**Femoral Head Necrosis**

**High-Energy Shock Wave Treatment of Femoral Head Necrosis in Adults**

Adults with Stages I to III osteonecrosis of the femoral head present an overall therapeutic challenge. The objective of the current prospective study was to show the effectiveness of high energy shock wave therapy in treatment of patients with Association Research Circulation Osseous Stage 1 to Stage III necrosis of the femoral head by assessing clinical and magnetic resonance imaging results. The current study presents the results of 22 patients with femoral head necrosis 1 year after shock wave treatment. The study population consisted of 10 women and 12 men with an average age of 54.9 years ( $\pm 12.3$ ). The scores achieved on the visual pain analog scale decreased from 8.5 before treatment to 1.2 after 1 year. Simultaneously, the Harris hip score increased from 43.3 to 92 points. Magnetic resonance imaging visualization of a distinct zone of sclerosis around the necrotic area remaining after treatment with extracorporeal shock wave therapy indicated therapeutic failure. The results obtained so far with high-energy shock wave therapy in these patients suggest that this method may offer an alternative to invasive treatment modalities for femoral head necrosis. A noninvasive and moderately priced method then would be available for the treatment of femoral head necrosis in the early stages of the disease process.

**Number of patients treated in the study: 22**

Parameters	Success	Success rate
Patients with a distinct improvement	therapeutic success	14 (66.6 %)
Patients with previous symptoms returned after 2 to 6 weeks	resistant to therapy	7 (33.3%)



**Fig 1A–B.** (A) Visual pain analog scale and (B) Harris hip score during the investigation period after extracorporeal shock wave therapy (ESWT) of hip necrosis in adults are shown.

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