

The Effectiveness of ESWT in Comparison with Usual Conservative Treatments in Subacromial Impingement Syndrome (SIS): Results of a Long-Term, Prospective, Single-Blinded, Randomized Clinical Trial

Author:

Mario Vetrano, M. C. Vulpiani, L. Minutolo, D. Trischitta, A. Ferretti

Institutions:

Physical Medicine & Rehabilitation Unit and "Kirk Kilgour" Sports Injury Centre, Sant'Andrea Hospital, University of Rome "Sapienza", Italy

Device and producing company:

MODULITH® SLK, Storz Medical AG, Switzerland

Introduction:

Subacromial impingement syndrome (SIS), with pain and limited motion, is a frequently encountered shoulder disorder. The aim of this prospective, single-blind, randomized clinical trial was to compare the effectiveness of focused extracorporeal shock wave therapy (ESWT) to the usual conservative approaches at long-term follow-up.

Methods:

One-hundred and twenty patients (Group 1, n = 60; Group 2, n = 60) with a confirmed stage I-II SIS, according to the Neer classification, were treated either by 3 sessions of ESWT (Group 1, age 58.2 ± 10.8 years), or by a standardized regimen of conservative treatments (Group 2, age 54.1 ± 12.1 years). Follow-up examinations were scheduled at short, mid and long term. Outcome measures were the same for both groups and included Visual Analogue Scale, Constant-Murley score, and a subjective clinical evaluation scale.

Results:

Both groups experienced a decrease in pain and an increase in shoulder function at short and mid-term follow-up, whereas the ESWT group (Group 1) demonstrated a significantly higher improvement at long-term follow-up.

Discussion:

We obtained significantly better results in the ESWT group (Group 1) at the mid and long-term follow-up, with satisfactory results in 75.4% and 80.7% of the patients, respectively as compared to 52.3% and 40.9% in Group 2, respectively.

Conclusion: ESWT is an effective approach for the treatment of SIS, with better results than the typical conservative approach at short and mid-term follow-up.