E-Poster

EP-112

Effect of Focussed Extracorporeal Shockwave Therapy in Primary Adhesive Capsulitis Patients With Type 2 Diabetes Mellitus: A Prospective Randomised Clinical Trial Comparing Two Different Energy Levels

Topic: Physical Modalities

Siddharth Rai[1], Mallikarjun Gunjiganvi[2], Harleen Uppal[3]

[1]*Physical Medicine and Rehabilitation, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India*
[2]*Trauma Surgery, AIIMS Mangalagiri, Mangalagiri, India*
[3]*Physical Medicine and Rehabilitation, VMMC, New Delhi, India*

BACKGROUND

Focussed Extracorporeal shockwave therapy (fESWT) is a worthwhile treatment modality for adhesive capsulitis of the shoulder joint; however, the clinical utility of the focussed ESWT approaches' energy difference effect is still unknown. Most of the previous works available have been done to test radial ESWT on periarthritis shoulder. Our study aimed to examine the effectiveness of high- and low-energy fESWT applied intensely for short time of four weeks on pain , functionality, and range of motion in frozen shoulder patients with type 2 diabetes mellitus and compares with a placebo group treated with light shoulder exercises. We hypothesise that fESWT will reduce pain, facilitate range of motion (ROM) recovery, and increase the ability to perform activities of daily living (ADL) and thus result in short-term functional outcome improvement in patients with primary adhesive capsulitis. This study aimed to assess the effectiveness of high (hfESWT) and low-energy ESWT (lfESWT) on pain and function in diabetic patients with frozen shoulder.

METHODS

The randomized controlled study evaluated the effects of four-week therapy of hfESWT and lfESWT in diabetic patients with adhesive capsulitis and compared it with a placebo group. The primary outcome was pain, Shoulder Pain and Disability Index Score and shoulder active range of motion (ROM) at baseline and end of four weeks.

RESULTS

A total of 150 patients were randomized to receive either hfESWT (50) or mfESWT (50) and placebo group (50). Demographics and clinical parameters were comparable at baseline. At the end of 4 weeks, there was a definite improvement in pain , range of motion and function for both intervention groups (each $p < 0.05$); however, comparisons of the variables between the high- and medium-energy groups showed no statistically significant difference (each $p > 0.05$). Both hfESWT and lfESWT are equally effective in controlling pain and improving ROM and shoulder function in people with diabetes with adhesive capsulitis. We recommend four weeks of treatment for favorable results. Registered in the Clinical Trials Registry of India (REF/2023/05/067451)

CONCLUSION

Consistent with the literature and based on our study results, we suggest that both the energy levels of fESWT show appreciable improvement in pain, which is the main complaint of frozen shoulder patients with type 2 diabetes mellitus. We suggest a four-week fESWT participation to attain favorable results.

Statement of Disclosures

None

Corresponding Author:
Siddharth Rai
Physical Medicine and Rehabilitation, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India
Email: siddharth.bmc@gmail.com

Doi: 10.5606/archisprm.2026.EP-112