



Comparative outcomes of extracorporeal shockwave therapy for shoulder tendinitis or partial tears of the rotator cuff in athletes and non-athletes

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Dear Editor,

We are interested in an article entitled ‘Comparative outcomes of extracorporeal shockwave therapy for shoulder tendinitis or partial tears of the rotator cuff in athletes and non-athletes: Retrospective study’ in your precious journal^[1]. The study was described as a retrospective study to compare outcomes of extracorporeal shockwave therapy (ESWT) for shoulder tendinitis or partial tears of the rotator cuff in athletes and non-athletes. It provides significant research results for clinicians to know that ESWT was an equally effective treatment in both the athletic group (AG) and non-athletic group (NAG), especially recommended in the treatment selection of athletes. Nevertheless, we have to consider several questions in the methods of the study.

First, in Figure 1, the flowchart of participants through the ESWT shows that 50 shoulders were randomized and allocated to AG and NAG, while there were 17 shoulders allocated to AG and 33 shoulders allocated to NAG. It was an inaccuracy that the authors used ‘randomized’ in the figure to describe their allocation method.

Second, we also missed how many shoulders had tendinitis only and how many shoulders had a partial tear of the rotator cuff tendon in the two comparison groups, respectively. The difference in the number of shoulders with tendinitis and a partial tear of the rotator cuff tendon can cause the results to be biased due to the baseline difference.

Third, in the method for ESWT, the authors did not tell us why they set the 3000 impulses of the shockwave at 0.28–0.32 mJ/mm² energy flux density in Ossatron or Orthospec Level 7

(0.32 mJ/mm²) to the affected shoulders^[1,2]. As we know, these specific parameters of ESWT have different effects on the treatment for shoulders; it needs to design different study groups to compare the efficacy of different parameters to find the most suitable parameter of ESWT for shoulder tendinitis or partial tears of the rotator cuff in athletes and non-athletes.

Finally, as a clinical study, a sample size evaluation is very important to get convincing results^[3]. The study only included 13 and 23 cases in AG and NAG, respectively, for analysis, and the authors did not calculate the suitable sample size required. The small sample size reduced the level of evidence.

ESWT is a non-invasive treatment technique involving the use of acoustic waves and is currently under extensive scrutiny for the management of musculoskeletal disorders^[4,5]. A recent systematic review encapsulated evidence supporting the efficacy of ESWT in ameliorating pain and enhancing functional mobility in patients with rotator cuff tendinopathy^[4]. Additionally, a contemporary clinical study on the application of ESWT to partial rotator cuff tears has shown improvements in pain and functionality post-therapy, as well as enhanced tendon appearance in MRI5. These findings further corroborate the clinical discoveries made by Chou et al^[1]. Hence, we believe that ESWT could be a future non-surgical treatment option for such conditions, but more comprehensive, large-scale, randomized controlled trials are required to confirm this standpoint.

Ethical approval

Our submitted manuscript does not involve any patients without the ethical approval document.

Consent

Our submitted manuscript does not involve any patients without the written informed consent documents.

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