

## **Abstract**

### **Title**

Comparison between the effectiveness of extracorporeal shockwave therapy (ESWT) and the surgical approach in the treatment of the rotator cuff tendinopathy.

### **Objective**

The main goal of this research work is comparing the effectiveness of extracorporeal shock wave therapy and the surgical intervention (arthroscopic approach) in the treatment of calcific rotator cuff tendinopathy depending on the outcome measures of the Constant-Murley Score (CMS), and the Visual Analogue Scale (VAS) from the recent scientific publications.

### **Methodology**

This thesis is systemic (literature) review. The studies which recruited in this research were randomized controlled trials, prospective studies, and retrospective case series studies which written in English language form, and published between the year 2000 to the year 2018. The studies were retrieved from following databases: EMBASE, PubMed, CINAHL, Medline, SpringerLink, ProQuest using different integrations of the key words. The participants in the studies were from both genders and all ages. The type of the pathology which included in this research was chronic calcific rotator cuff tendinopathy. Regarding the intervention types both Radial, and Focused ESWT with low, medium, and high intensities and the arthroscopic interventions were the main types of interventions that are used in this study.

### **Results**

After the final review of the studies only 33 studies were found qualified to be included in this research (21 shockwave articles, and 12 surgical articles). All of them were published between the year 2000 and the year 2016. With an approximated patients' ages that raged from 26 to 83 years of age. Both FESWT, RESWT in different energy levels (high, medium, low) in regarding the shockwave articles, and an arthroscopic debridement (removal) of the calcification of the rotator cuff, and/or acromioplasty) in regarding the surgical articles. There was a significant

difference in the CMS, and VAS after the application of both ESWT and the Arthroscopy but the more improvement was found in the ESWT studies.

### **Conclusion**

There was evidence that supports the effectiveness of the surgical approach represented in the arthroscopic intervention in treating chronic calcific rotator cuff tendinopathy and other tendon pathologies, but these evidence that found this effect are from the low level evidence. Thus, as a conclusion the patients with rotator cuff tendinopathy may advised to seek for the ESWT as their first option for treatment which is considered as a less invasive and easy to apply treatment method compared to the surgical approach, and seeks the arthroscopic approach in case of failure of the ESWT treatment.

### **Key words**

Rotator cuff tendinopathy, Extracorporeal shockwave therapy, Arthroscopy, Shoulder calcification, tendinitis, surgical debridement, Radial shock waves, Rotator cuff, tendinosis, Constant-Murley score, therapy, visual analogue scale, focused shock waves.