

The result is of high clinical relevance, as the study was able to demonstrate the superiority of ESWT over steroid injections in the course of time and the long-term efficacy in the treatment of supraspinatus tendinitis. The author team works with our PiezoWave2 and the therapy source FB10G6.

Comparison of Extracorporeal Shock Wave Therapy and Ultrasound-Guided Shoulder Injection Therapy in Patients with Supraspinatus Tendinitis (using the PiezoWave2 and the FB10G6)

Background

Only few studies have compared the effects of ESWT with those of steroid injections in the treatment of patients with supraspinatus tendinitis — a subtype of non-calcific shoulder tendinitis. This study compared the clinical effect of ESWT with that of ultrasound (US)-guided shoulder steroid injection therapy in patients with supraspinatus tendinitis.

Method and Findings

26 patients were randomized: 13 in the US-guided shoulder injection group and 13 in the ESWT group. Treatment outcomes were evaluated using the pain visual analog scale (pVAS), the American Shoulder and Elbow Society (ASES) score, and the Constant score at baseline and at 1 and 3 months after the procedure.

Remarkably, the effects of independent ESWT treatment consistently increased over time, those of the US-guided shoulder steroid injection did not, presumably because the rebound phenomenon diminished the effects of the steroid treatment.

It should be noted that there are potential complications of steroid injections, including subcutaneous atrophy, infection, and ruptured tendon. Glucocorticoids has been reported to have significant negative effects on tendon cells.

Conclusion

ESWT can be a safe and effective treatment for shoulder tendinitis and US-guided shoulder injections did not produce superior effects than independent ESWT treatment. **Considering the complications and rebound phenomenon of steroid injections, ESWT treatment may be a good alternative in patients with supraspinatus tendinitis with increasing effects over the time.**

Original Article

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Comparison of Extracorporeal Shock Wave Therapy and Ultrasound-Guided Shoulder Injection Therapy in Patients with Supraspinatus Tendinitis

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Background: The present study compared the clinical effect of extracorporeal shock wave therapy (ESWT) with that of ultrasound (US)-guided shoulder steroid injection therapy in patients with supraspinatus tendinitis. We hypothesized that the two treatments would show comparable results.

Methods: The inclusion criteria were age over 20 years and diagnosis of supraspinatus tendinitis using US. Ultimately, 26 patients were assigned using blocked randomization: 13 in the US-guided shoulder injection group and 13 in the ESWT group. Treatment outcomes were evaluated using the pain visual analog scale (pVAS), the American Shoulder and Elbow Society (ASES) score, and the Constant score at baseline and at 1 and 3 months after the procedure.

Results: At 1 month after the intervention, pVAS, ASES, and constant score were significantly higher in the US-guided shoulder injection group than in the ESWT group, but not at 3 months after the intervention. Both groups showed clinically significant treatment effects at 3 months after the intervention compared to baseline. No significance was shown using equivalence testing.

Conclusions: US-guided shoulder injection therapy was not superior to ESWT therapy. Considering the complications and rebound phenomenon of steroid injections, interventions using ESWT may be a good alternative to treat patients with supraspinatus tendinitis.

Keywords: Supraspinatus tendinitis, Extracorporeal shock wave therapy, Injection, Random allocation

A number of literature reviews have revealed that the incidence of rotator cuff disorders is approximately 10% in individuals aged < 20 years and 60% in those aged ≥ 80 years, while the incidence of rotator cuff tendinitis is

approximately 5%–6%.^{1,2} Despite the common occurrence, the exact pathophysiology of rotator cuff tendinitis remains unclear. In most cases, the disease is self-limiting, but chronic tendinitis symptoms can develop in rare cases. The general conservative treatments include rest, nonsteroidal anti-inflammatory drugs, physiotherapy, and steroid injections, although the therapeutic effects of these treatments have not yet been established.³ Various studies have evaluated the efficacy of steroid injections in the shoulder and found that such treatment improves range of motion by reducing pain and inflammation.^{4,5} However, the long-term effects remain controversial. As an alternative treatment, extracorporeal shock

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