

COMPARATIVE STUDY BETWEEN BLIND AND ULTRASOUND-GUIDED STEROID INJECTION FOR CARPAL TUNNEL SYNDROME.

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Introduction

Clinical symptoms of carpal tunnel syndrome numbness and paresthesia of the hand with weak hand grip and reduced function. Clinical signs include positive Phalen's and Tinel's signs. Underlying pathophysiologic processes entail median nerve demyelination, ischemic injury and synovial inflammation.

Nerve conduction study is the main diagnostic modality in the diagnosis of carpal tunnel syndrome. Other modalities include ultrasonography and MRI assessment.

Non-steroidal anti-inflammatory drugs and hand splint are widely used as a first line of therapy. Surgical nerve decompression is performed in case of failed medical therapy or progressive motor or sensory deficit. Surgical procedures may be conducted using open or endoscopic approaches.

Injection of local steroids is currently established as a minimally invasive line of management, which proved high efficacy with no or minimal post-procedural problems.

Aim of the work

The aim of this study was to prove the efficacy of steroid injection in the treatment of carpal tunnel syndrome and decide which approach is better.

Patients and Methods

We enrolled 30 patients with mild or moderate carpal tunnel syndrome. 15 patients were injection blindly and 15 patients were injected under ultrasound guidance. We used a combination of triamcinolone and lidocaine.

Non-guided injection was performed with identification of the tendon of the palmaris longus muscle, then insertion of the needle just ulnar to it.

Guided injection was conducted with sonographic recognition of the carpal tunnel contents; flexor retinaculum, median nerve and flexor tendons. This is followed by introduction of the needle at the medial side of the ultrasound probe, then injecting the steroid in the carpal tunnel.

Evaluation was accomplished by clinical and sonographic analysis. Initial assessment was performed before the procedure and follow-up was carried out four weeks later. The acquired values were compared to each other and tabulated.

Results

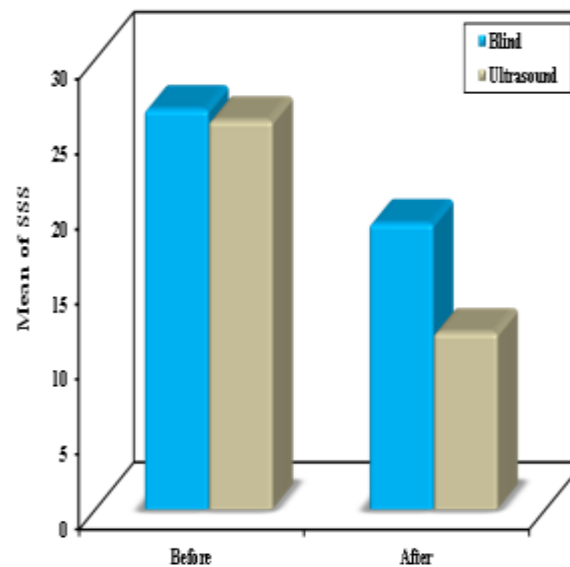


Figure 1: Comparison between the two studied groups according to SSS

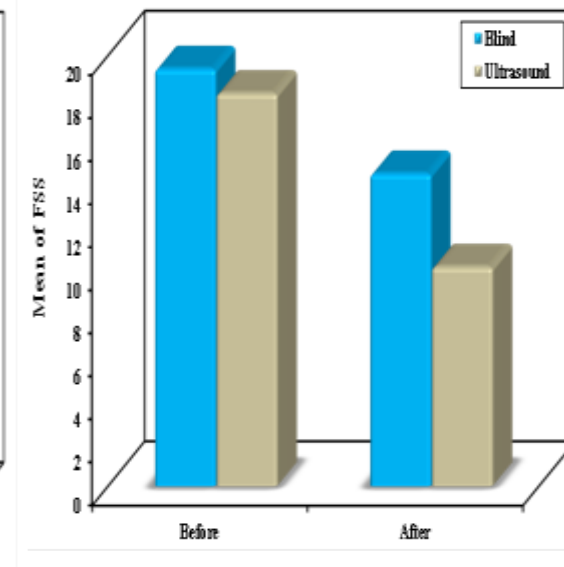


Figure 2: Comparison between the two studied groups according to FSS

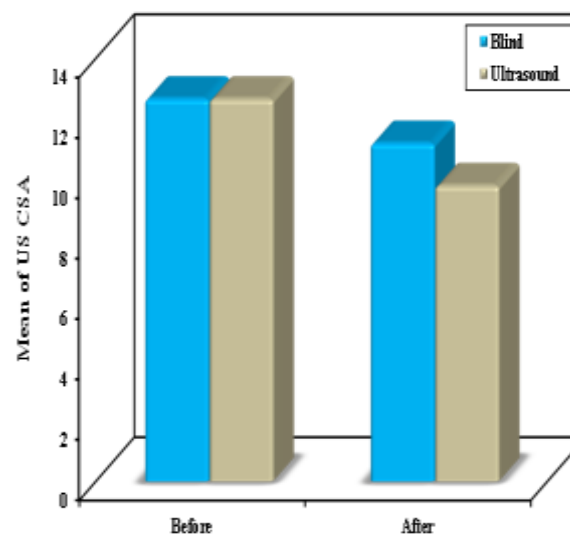


Figure 3: Comparison between the two studied groups according to CSA

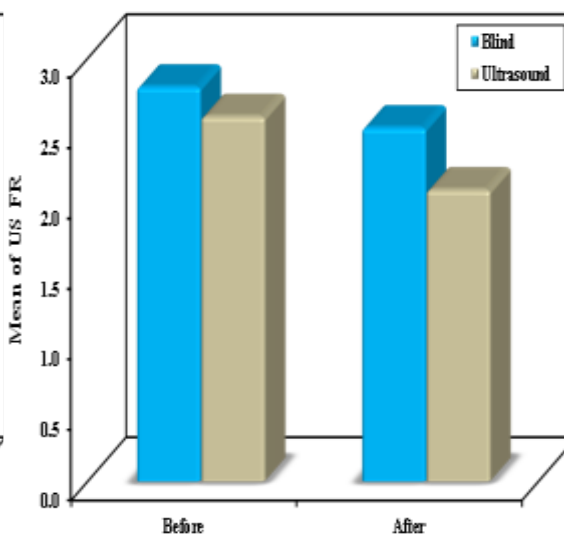


Figure 4: Comparison between the two studied groups according to FR



Figure 5: Ultrasound-guided steroid injection.

Conclusion

Local injection of steroids is efficient in the treatment of carpal tunnel syndrome with proved superiority of the ultrasound-guided approach.