Инъекция аутологичной крови в сравнении с инъекциями кортикостероидов при лечении «теннисного локтя»

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Autologous blood injection versus corticosteroid for tennis elbow
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INTRODUCTION

Tennis elbow is a common cause of lateral elbow pain. The prevalence rate is 1 % to 4 %, aged 35 to 55 years [1, 2]. It is said to be a degenerative process, rather than an inflammatory process, characterized by angiofibroblastic degeneration or hyperplasia within the common extensor tendon, especially affecting the extensor carpi radialis brevis.

Conservative treatment can be an option with rest, bracing, physical therapy, NSAID. Surgical treatment can be open, percutaneous or orthopedic release of extensor origin [1, 2]. The most common treatment that is given by orthopedic surgeons is local injection or corticosteroid combined with local anesthetics. Autologous blood injection delivers blood borne cellular and humoral mediators to stimulate the regeneration process within the tendon3. Our study compared the efficacy of autologous blood injection versus corticosteroid injection for the treatment of tennis elbow.

MATERIALS AND METHODS

The diagnosis of tennis elbow was made on the basis of pain in the lateral epicondylo, tenderness over the origin of extensor carpi radialis brevis 1 cm distal to the lateral epicondylo. During dorsiflexion of the wrist and middle finger the patient feels pain.

Between January 2013 and January 2014, 25 men and 35 women (mean age 35.2 years) presenting with lateral epicondyloitis were randomized to get either autologous blood injection (2 ml of autologous venous blood collected from antecubital fossa of the ipsilateral side mixed with 1 ml of 2 % xylocaine hydrochloride) or triamcinolone acetonide steroid injection 1 ml 40 mg mixed with 1 ml of 2 % xylocaine hydrochloride, given by a single orthopaedic surgeon. Patients were advised to abstain from heavy work, NSAID.

Patients occupations were individualized according to sedentary, light, medium, heavy and very heavy [7]. Patients were assessed before (day 0) and after (days 15, 30 and 60) treatment for elbow pain, function and grip strength. Patients were followed up at 1 year to assess elbow pain.
RESULTS

10 men and 15 women received an autologous blood injection. Whereas 15 men and 20 women received corticosteroid injection. All patients completed the 1 year follow up. The characteristics of both groups were similar (table 1). No complications were noted. In both groups elbow pain, function and grip strength improved dramatically after treatment but the mode of improvement differed (table 2), compared with autologous blood injection, corticosteroid injection improved all 3 scores at a faster rate after the first 15 days and then started to decline slightly until day 60. After autologous blood injection all 3 scores (pain, function and grip strength) improved steadily and were much better.

DISCUSSION

Injection of autologous blood was more effective than corticosteroid injection in case of pain control, function and grip strength. The complete recovery rate at 2 months was 90% after autologous blood injection and 55% after corticosteroid injection.

Corticosteroid injection gives rapid recovery but temporary improvement in the first month [6]. Autologous blood injection stimulates the inflammatory cascade within the degenerated tendon by providing cellular and humoral mediators for regeneration [3]. Ultrasonogram shows tendon reparation. Histological studies show non-inflammatory angiofibroblastic tendinosis, neurovasculization and mucoid degeneration in lateral epicondylitis, corticosteroid injection has superior short-term effects but no intermediate or long term effects [4, 5]. Platelet rich plasma has higher level of growth factors for stimulation of regeneration and yields similar results to autologous blood in terms of pain reduction and functional improvement at 6 months [7]. For this preparation and application of platelet-rich plasma requires specialized equipment, which is extensive and very time consuming.

CONCLUSION

Autologous blood injection is more effective than corticosteroid injection in improving pain, function and grip strength. So that is why we recommend it as a first line treatment because it is easy to push and very effective.

REFERENCES


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