ORIGINAL ARTICLE

Results of Local Corticosteroid Injections in Medial Epicondylitis

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ABSTRACT

Objective: To assess the results of local corticosteroid injections in medial epicondylitis
Study Design: Descriptive study
Place and Duration of Study: Department of Orthopedic MTI Khyber Teaching Hospital Peshawarfrom 1stJanuary 2015 to 30thJune 2018.
Methodology: Twenty four patients with medial epicondylitis presenting to OPD (outpatient department) were included in the study. Each patient was injected with combination of corticosteroid (1ml of 40mg of methylprednisolone acetate) and local anaesthetic (1ml of 2% plain lignocaine) at the point of maximal tenderness on the medial side of the affected elbow. Post-treatment assessment of intensity of pain was done at 8 weeks using VAS pain score.
Results: Out of twenty four (n=24) patients, thirteen patients (54.17%) were females and eleven patients (45.83%) were males. Average age of the patients was 43.17±5.85SD. In 19 patients (79.17 %), right side was involved while in 5 patients (20.83%), left side was involved. Mean pretreatment VAS was 8.08±1.7SD and mean post treatment VAS was 1.62±1.9SD at 8 weeks. Statistically significant decrease was observed in mean VAS pain score at 8 weeks after local corticosteroid injections (p-value <0.001). No patient was lost to follow up. Overall, complications developed in 4 patients (16.67%).
Conclusion: Local corticosteroid injection has excellentshort term effect on medial epicondylitis. We recommend comparative long term study to confirm our results.
Key Words: Local corticosteroid Injections, Medial epicondylitis**,** Golfer's elbow

INTRODUCTION

Medial epicondylitis also called "golfer's elbow" is common cause of medial sided elbow pain seen in orthopedic clinics. It usually affects 3.8% to 8.2% of people in occupational settings, especially manual laborers and people who requires repetitive use of the wrist, forearm and elbow.It equally affects both genders in fourth to sixth decades of life[1-5]. Medial epicondylitis is found in about 10%-20% of patients presenting with epicondylitis[6].

Medial epicondylitis is caused by repetitive eccentric loading of the muscles causing wrist flexion and forearm pronation combined with valgus overload at the elbow. This leads to microtrauma and degeneration of the common flexor tendon origin at the elbow[7].

Patients usually present with insidious onset of medial sided elbow pain which is increased by resisted wrist flexion and forearm pronation. On examination, there is tenderness to palpation over the medial side of the elbow especially 5mm to 10mm distal and anterior to the midpoint of the medial epicondyle. There may be warmness and localized swelling at the medial epicondyle[2]. Radiographs of the elbows are usually unremarkable. In 20% - 25% of the patients, soft tissue calcificationsmay be seen in close proximity to the medial epicondyle[8].

Medial epicondylitis is usually treated non-operatively. This includes rest, NSAIDs, physical therapy, night splinting, extracorporeal shock wave therapy, local steroid injections, local platelet-rich plasma injections and prolotherapy[9-15]. Non-operative treatment is usually successful in 60% to 90% of patients inrelieving symptoms of medial epicondylitis[9].

If a patient does not improve with non-operative treatment, then surgery is considered. Various surgical options for medial epicondylitis includes percutaneous release, medial epicondylectomy with or without ulnar nerve release and/or transposition and/or flexor-pronator z-lengthening[6,16-21].

There are very few studies especially locally evaluating the results of local corticosteroid injections in Golfer's elbow. In this prospective study, we have evaluated the results of local corticosteroid injections in treatment of medial epicondylitis/golfer's elbow.

METHODOLOGY

This descriptive study was conducted at Department of Orthopedic MTI Khyber Teaching Hospital Peshawar from 1st January 2015 to 30th June 2018. Twenty four patients with medial epicondylitis were enrolled. Patient of both gender, aged 25 to 60 years with clinically diagnosed medial epicondylitis (medial elbow pain, point tenderness to palpation, pain on resisted wrist flexion and resisted forearm pronation), duration of symptoms >12 weeks, VAS pain score greater than 4, patients not responding to rest, NSAIDs and physical therapy were included. Patients having pregnancy, rheumatoid arthritis, diabetes mellites, cervical spine pathology, elbow arthritis, elbow instability, ulnar nerve neuropathy, carpal tunnel syndrome, VAS pain score of less than 4, history of fresh trauma, previous local corticosteroid injection and elbow surgery were excluded. Detailed history, physical examination and both anteroposterior and lateral radiographs the affected elbow were performed. Using 0-10cmVAS, pre-injection score was calculated for every patient with 0 indicating no pain and 10 indicating maximum pain. All patients were injected at the point of maximal tenderness on the medial side of the affected elbow with combination of corticosteroid (1ml

of 40mg of methylprednisolone acetate) and local anaesthetic(1ml of 2% plain lignocaine)under aseptic technique. All the patients were observed for half an hour after the injection. Patients were encouraged to continue their normal activities and to use oral paracetamol for pain. All patients were scheduled for follow up at 8 weeks and patients were asked for VAS pain score and examined for any complications. Results were considered excellent if VAS score was decreased to 0 (zero), good if VAS score was decreased to 1-2, fair if VAS score was decreased to 3-4 and poor if VAS score was remained/increased to > 4. SPSS version 20 was used for data analysis.

RESULTS

Thirteen (54.17%) were females and 11 (45.83%) were males. Average age of the patients was 43.17±5.85SD. Age range was 28 to 54 years. In 19 patients (79.17 %), right elbow was involved while in 5 patients (20.83%), left elbow was involved. Mean duration of symptoms was 16.5 weeks±3.54SD while common duration of symptoms was 12-15 weeks (Table 1). Mean pretreatment VAS was 8.08±1.7SD and mean post treatment VAS was 1.62±1.9SD at 8 weeks (Figure 2). Statistically significant decrease was observed in mean VAS pain score at 8 weeks after local corticosteroid injections (p-value <0.001). No patient was lost to follow up. 10 patients (41.47%) had excellent results (VAS score 0), 8patients (33.33%) had good results (VAS score 1-2), 3 patients (12.5%) had fair results (VAS score 3-4) and 3 patients (12.5%) poor results (VAS score >4). Overall, complications developed in4patients (16.67%), 2 patients having temporary pain at injection site, 1 patient having skindiscoloration and 1 patient having ulnar nerve injury. There was no complication of tendon rupture or infection in our study.

Table 1: Duration of symptoms (n=24)

Weeks	No.	%
12-15	12	50.0
15-20	7	29.17
>20	5	20.83

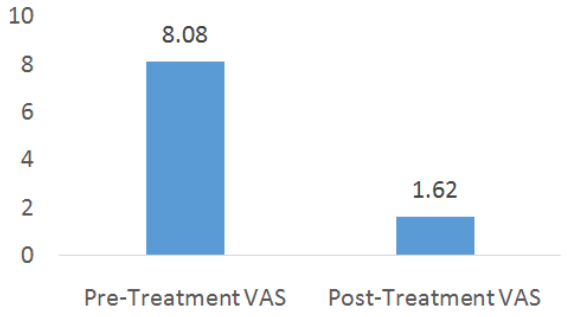

Fig. 1: Mean pre-treatment and post-treatment VAS pain score

DISCUSSION

Medial epicondylitis also called Golfers elbow is much less common than lateral epicondylitis which has been diagnosed seven to ten times more often[22]. Our study showed that 13 (54.17%) female patients and 11 (45.83%) were males. Average age of the patients was 43.17±5.85SD. Age range was 28 to 54 years. This is comparable to other studies in the literature where age affected by medial epicondylitis is fourth to sixth decadeand prevalence in both genders is equal[1-5]. In our study, right elbow was involved in 19 patients (79.17 %) while in 5 patients (20.83%), left elbow was involved. This goes with other authors as medial epicondylitis usually affects dominant arm and right arm dominance is common[7,8,22].

Local corticosteroid injections are used when medial epicondylitis fails to respond to rest, NSAIDs and physical therapy[9-15]. Statistically significant decrease was observed in mean VAS pain score at 8 weeks after local corticosteroid injections (p-value <0.001). Similar reports were given by other authors and local corticosteroid injection is considered to be the treatment of choice for epicondylitis affecting both side of the elbow.They used both methylprednisolone acetate and hydrocortisone successfully[10,23-25].The beneficial effects of steroid has been attributed to its anti-inflammatory properties[10].However, Maruthi and Shiwanna didn't notice any significant effect of local corticosteroid injections on medial epicondylitis in their study and concluded that local corticosteroids are associated with complictions[26].In the current study, complications developed in 4 patients (16.67%), 2 patients having temporary pain at injection site, 1 patient having skin discoloration and 1 patient having ulnar nerve injury. There was no complication of tendon rupture or infection in our study. It was comparable to complications reported by Maruthi and Shiwanna[26].

However, there were some limitations of our study. No comparison group was present in our study so it is difficult to exclude the placebo effect of the local corticosteroid injections.Sample size was small and there was short follow up (8 weeks). Larger study with longer follow up preferably with a comparison group is recommended to more precisely establish the effectiveness of local corticosteroid injection in medial epicondylitis.

CONCLUSION

Local corticosteroid injection has excellentshort term effect on medial epicondylitis and we recommend it for patients with medial epicondylitis not responding to rest, NSAIDs and physical therapy.

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