

Corticosteroid injection as a treatment modality in management of plantar fasciitis

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Objective: To study the efficacy of corticosteroid injection as treatment modality in management of plantar fasciitis.

Methodology: A total of 150 patients of both the genders diagnosed as a case of plantar fasciitis were included in study. Patients above the age of 25 years with pain for more than 6 weeks were included and patients with pain secondary to trauma, infection or tumors were excluded from the study. Final results were evaluated by comparison of Visual analog score (VAS) for pain before the corticosteroid injection, immediately after the injection, after the interval of 15 days, 1 month and 3 months.

Results: Out of 150 patients, 95(63%) were

female and 55(37%) males. Mean age was 43 ± 0.707 years (range 40-49). 109 patients were overweight lying in range of 25-29.9 BMI. Mean BMI was 28.4 ± 0.212 . Mean VAS for pain before the corticosteroid injection was 9.48, and immediately after the corticosteroid injection mean VAS was 1.02 and at 15 days, 1 month and 3 months it was 1.89, 2.21 and 2.52, respectively.

Conclusion: Corticosteroid injection is an effective option for the management of plantar fasciitis, as it dramatically reduced the pain in these patients. (Rawal Med J 202;45:120-122).

Keywords: Plantar fasciitis, corticosteroid injection, heel pain, foot pain.

INTRODUCTION

Plantar fasciitis (PF) is the recognized reason for the inferior heel pad pain.¹ Repetitive micro trauma at the attachment of plantar fascia to calcaneum is one the main reasons for the disease.^{2,3} It is widely reported in females of 40-60 years old.⁴ It comprises of up to 15% of known etiologies of foot pain requiring medical attention.⁵ The etiology is not known in nearly 85% of cases.⁶ Although it is usually self-limiting condition, patient look forward toward their physician to alleviate pain because of its prolonged duration (6-18 months).⁷ PF is frequently diagnosed as a painful heel after prolonged inactivity or first step out of bed in morning or after prolonged standing.^{8,9} It is usually a clinical diagnosis, however, radiological investigations are required to exclude other causes. Conservative treatment is almost always the first option such as icing, rest and changes in footwear, physical therapies including orthotics, arch supports, taping and splinting. Other options include pharmacological agents such as NSAIDs. In case of no response to above modalities,

corticosteroid injection is the useful option, being the minimally invasive and almost the instant pain relief from the condition. Aim of this study was to evaluate the effectiveness of corticosteroid injection in relieving the pain of plantar fasciitis.

METHODOLOGY

This descriptive case series study was conducted at Creek General Hospital/United Medical & Dental College from November 2016 to January 2018. 150 patients of both the genders diagnosed as a case of plantar fasciitis were included in study after consent from the patient and approval from the ethical review committee. Patients above the age of 25 years with pain for more than 6 weeks were included in study and patients with pain secondary to trauma, infection or tumors were excluded from the study. Methyl-prednisolone 80mg/ml + 1cc of 2% xylocaine was injected in to heel pad from the medial side at site of maximum tenderness by using the palpation method. Final results were evaluated by comparison of VAS for pain before the corticosteroid injection, immediately after the

injection, after the interval of 15 days, 1 month and 3 months.

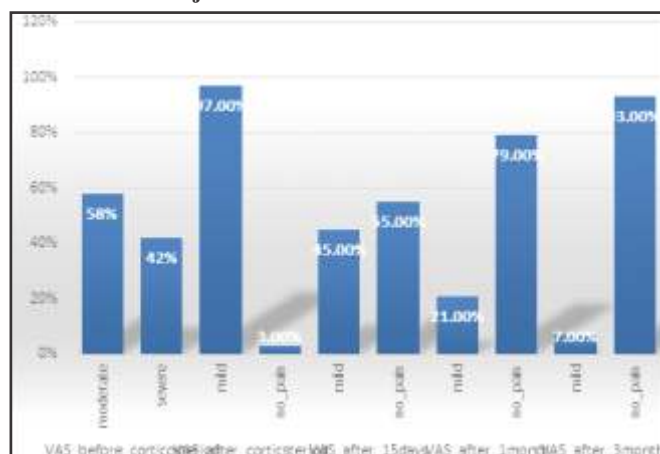
RESULTS

Out of 150 patients, 95(63%) were female and 55(37%) males. Mean age was 43 ± 0.707 years (range 40-49). 109 (73%) patients were overweight lying in range of 25-29.9 BMI. Mean BMI was 28.4 ± 0.212 (Table).

Table. Demographic features of study population (n=109).

Demographic profile		Percentage	Frequency
Gender	Male	37%	55
	Female	63%	95
Age	29-39 yrs.	33%	50
	40-49 yrs.	50%	75
	50-59 yrs.	17%	25
BMI	18.5-24.9	8%	12
	25-29.9	73%	109
	<30	19%	29
Occupation	Unemployment	29%	44
	Self employed	18%	25
	Skilled labour	28%	42
	Professional	21%	32
	Business	5%	7
Marital status	Single	8%	12
	Married	88%	132
	Widow	4%	6

Figure. Comparison of VAS scoring before and after taking corticosteroid injection at different intervals.



58% VAS before corticosteroid was moderate and severe at 42%, 97% VAS after corticosteroid was mild and no pain was noted at 3%, VAS after 15 days was noted 45% mild and 55% was recorded no pain,

VAS after 1 month was noted 21% and rest of 79% was noted no pain, VAS after 3 months 7% was in mild pain and 93% was recorded no pain.

Mean VAS for pain before the corticosteroid injection was 9.48, which was significantly higher and immediately after the corticosteroid injection mean VAS for pain was 1.02. At the interval of 15 days, 1 month and 3 months, the mean VAS was 1.89, 2.21 and 2.52, respectively. When comparing the VAS for pain at different intervals effect of the corticosteroid injection showed significant improvement in the VAS for pain.

DISCUSSION

Plantar fasciitis remains the one of the difficult problem to treat, it's still causing confusion among the doctors.¹⁰ About half of the patients with heel pain have the calcaneal spur and associated plantar fasciitis diagnosed.¹¹ Still the association between plantar fasciitis and calcaneal spur is not fully understood.¹²

A corticosteroid injection has shown significant results in short to medium term benefits in the management of plantar fasciitis.¹³ There was no significant difference between the steroid and PRP groups in the VAS measured at 3 weeks and 6 months.¹⁴ The mean age was 43 ± 0.707 that was consistent with other studies.^{1,7,15,16} Mean BMI was 28.4 ± 0.212 .

Wolgan et al observed increased reduction in pain with the steroid injection alone at one month as (84%).⁷ With regard to other published trials, the pain scores before the injection into our study were higher with a mean of 9.48.^{17,18} The VAS for pain after the injection was 1.02 and recording the VAS at different intervals such as 15 days, 1 month and 3 months the mean VAS for pain was 1.89, 2.21, 2.52, respectively.

After 3 month in around 93% of patients no pain was reported and only 7% patients reported mild pain. Looking at these scores, one can assume the beneficial effect of corticosteroid injection in management of plantar fasciitis.

CONCLUSION

Steroid injection is the better option for the

management of plantar fasciitis, especially in terms of safety and effectiveness, as it was associated with no complications and it dramatically reduced the pain in patients with plantar fasciitis at the time of injection and at 3 months.

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