



PREVALENCE OF PLANTAR FASCIITIS IN TRAFFIC POLICE OFFICERS: A CROSS SECTIONAL STUDY

Physiotherapy

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ABSTRACT

PF is causes inflammation of plantar fasciia due to the micro-trauma of plantar fascia because prolong standing job and walking on uneven surface. Traffic Police Officers demand the long standing job during his/her duty on field or on road. Method:-Both M/F Traffic Police in age between 40-60 year old are included in this study. And these Traffic Police are from the Police station that are around the Pune. If having any foot deformities, or Any fractured to the foot, etc. they are be excluded from these study. Result:-The total 88 Traffic police officer's are included into the study. In which the 25% prevalence of Plantar fasciitis was found by performing the Windlass test, and same Officer's got more the score in Foot Functional Index. Conclusion:- The traffic police having standing job for long hour of time that causes the trauma to the plantar fasciia that cause the PF.

KEYWORDS

Plantar Fasciitis(PF), Traffic Police, Windlass Test.

INTRODUCTION

Heel pain was most commonly seen in Plantar Fasciitis. It involves plantar fascia that inflammation causes a thickness of band that runs across the bottom of your foot and connects your heel bone to your toes[1]. The first steps in the morning causes the stabbing pain that commonly indicate the Plantar Fasciitis. As you get up and move more, the pain normally decreases, but it might return after long periods of standing or after rising from sitting[2]. Plantar fasciitis is more common in runners. In addition, the risk of Plantar Fasciitis are people who are overweight and those wear shoes with inadequate support[3]. PF can Cause due to training errors, overuse, improper or excessively worn footwear, and training on unyielding surfaces. Micro trauma to the plantar fascia can cause due to sudden increases in weightbearing activity, particularly those involving running that exceeds the rate of body's ability to recover. Some occupations demand prolong standing that causes weight bearing on the foot because of these the repetitive tensile load placed on the fascia that considered risk to Plantar Fasciitis[2]. Windlass test was performed to diagnosed PF in Traffic Police Officer's. The unhealthy diet and irregular eating time and lack of exercise make them obese and the long static standing hours makes their body stiff. Improper footwear they use also causes foot posture related problems especially as they require to stand for long hours[6]. Foot Function Index (FFI) was developed as a self-reporting measure that assesses multiple dimensions of foot function on the basis of patient-centered values. The FFI consists of 23 items divided into 3 subscale[5].

FIGURE 1:-LATERAL VIEW OF PLANTAR FASCIA

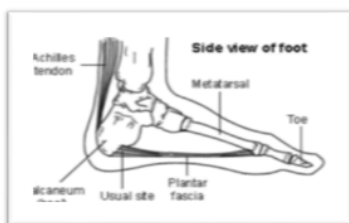
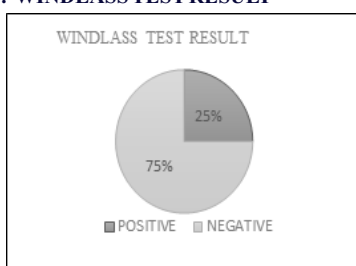


FIGURE 2:-WINDLASS TEST RESULT



TABEL 1 :- WINDLASS TEST RESULT

WINDLASS TEST	Number of people
Positive	22
Negative	66

MATERIALS & METHODOLOGY:-

This cross sectional study was conducted in the department of Physiotherapy during the period September 2019 and March 2020. The study procedure for this study was as follows. Permission was taken to conduct Windlass test assessment for traffic policemen through administrator, Pimpri-Chinchwad traffic policemen department. Both male and female Traffic Police officers in age between 40-60 year old are included in this study. And these Traffic Police are from the Police station that are around the Pune. The Traffic Police officers having any foot or heel trauma, Foot deformities, Pregnant and lactating women, Previous diagnosis of neuropathy of lower extremity, Vascular diseases and those who suffer from skin ulceration (infection or wound) on the heel, Soft tissue injuries, or Any fractured to the foot they are be excluded from these study. Windlass test was performed on Traffic Police Officer's. In sitting position with ankle in neutral position for stabilization and after that one hand just proximal to the 1st head of metatarsal. And extend the 1st phalanx that causes tightening the plantar fascia and cause the tenderness over the attachment of plantar fascia on the medial aspect of heel[4]. And FFI was also gave to the Officer's to find the pain, disability and activity limitations with the help of the scoring that shows the more the score more the pain, disability and activity limitation.

RESULTS:-

A total of 88 Traffic Police Officer's were include into the study. The mean age of the patients was 45 ± 5 years. There were 74 males and 14 females. Among them the 25% of Plantar Fasciitis prevalence was found by performing Windlass test. In which 46% officer's got on both legs having Windlass test Positive, and 27% Right and Left foot each having Windlass test Positive. 39% of Traffic Police Officer's got above 15% score in FFI.

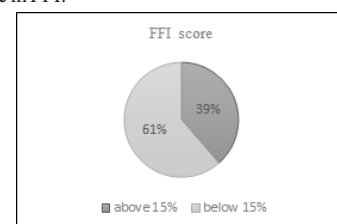


FIGURE 3:- FFI SCORE

TABEL NO.2 :-FFI SCORE

FFI SCORE	NO. OF TRAFFIC POLICE
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ABOVE 15%	34
BELOW 15%	54

DISCUSSION:-

This study was designed to find the prevalence of plantar fasciitis in this study gave the prevalence of plantar fasciitis in traffic police officers, in which I found the 25% prevalence that show the positive windlass test that represent the plantar fasciitis and the Foot Functional Index show the pain, difficulty and activity limitation due to the plantar fasciitis syndrome. The scale showing high score indicate greater disability/decreased function.

The unhealthy diet and irregular eating time and lack of exercise make them obese and the long static standing hours makes their body stiff. Improper footwear they use also causes foot posture related problems especially as they require to stand for long hours[6].

While the exact etiology of plantar fasciitis is not clear, it is thought to be caused by an over loading of the fascia due to prolonged standing, walking, and running. These stressors cause the overloading and repetitive "micro-traumas" to the fascia[4].

From this the Traffic police officers have demand the long standing job because of these the causing the micro-trauma to the fascia which results the Plantar Fasciitis problem is common in Traffic Police Officers. 88 traffic officers had participated in the study In which some traffic officers were shown positive results for windlass test and this same officers got higher score in the Foot Function Index that indicate more pain and difficulty.

From our study we found that in lower limb is more exposed to injuries due to standing for long time or because of the occupational stresses related to standing for many year. The unnatures and the incorrect way of standing also predispose to the resulting pain.

Repetitive stresses on the region of foot sole, typically caused by tension and tearing of plantar fascia, which lead to micro trauma of the tissue and consequently inflammation of the lesion area causes plantar fasciitis. Through these study we found that there is increased incidence of plantar pain with increasing years of standing during their job duties.

CLINICAL IMPLICATION:-

The major clinical implication of findings in plantar fasciitis is common in people having standing job and it is largely undetected public health problem. Screening for is a service that need to be incorporated into health problems of different work environments. It is important to increase awareness of the signs and symptoms of plantar fasciitis to avoid further complications.

CONCLUSION:-

The study show the prevalence of plantar fasciitis in traffic police officers. The traffic police having standing job for long hour of time that causes the trauma to the plantar fasciitis that cause the plantar fasciitis.

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