

ASSESSMENT OF PAIN ,PHYSICAL FUNCTION AND DISABILITY IN PATIENTS WITH LATERAL EPICONDYLITIS

Dr Shreya Deshak¹, Dr Ujwal Yeole², Saikrupa moralwar³, Dr Rasika Panse⁴

1,Assistant Professor, Department of Physiotherapy, Tilak Maharashtra Vidyapeeth Pune

2,Associate Professor, Department of Physiotherapy, Tilak Maharashtra Vidyapeeth Pune

3, Final year, Department of Physiotherapy, Tilak Maharashtra Vidyapeeth Pune, India

4, Assistant Professor, Department of Physiotherapy, Tilak Maharashtra Vidyapeeth Pune

Received: February 02, 2019

Accepted: March 19, 2019

ABSTRACT: *Background: Lateral epicondylitis, also known as "Tennis Elbow", is the most common overuse syndrome in the elbow. It is a tendinopathy injury involving the extensor muscles of the forearm. The lateral epicondylitis is characterized by pain and tenderness at the lateral epicondyle of the humerus as there is non-specific inflammation at the origin of the extensor muscles of forearm. The pain is common in lateral epicondylitis while very less research is done on disability and physical function. To assess the pain, physical function and disability by using Patient Rated Tennis Elbow Evaluation (PRTEE) Scale and to assess the physical function by using sphygmomanometer. A cross sectional study with analytical design included 100 patients were selected from multicenter hospitals, from them 50 patients were selected according to inclusion and exclusion criteria. The assessment of pain and disability was done by PRTEE scale and assessment of physical function was done by checking grip by sphygmomanometer. The results showed that in 26% patients grip was affected, in 28% physical function was affected and in 29% patients there was pain. It is concluded that pain, physical functions are affected, as well as the disability is present in patient with lateral epicondylitis.*

Key Words: *Pain, physical function, disability, Patient Rated Tennis Elbow Evaluation scale, sphygmomanometer.*

Introduction

Lateral epicondylitis, also known as "Tennis Elbow", is the most common overuse syndrome in the elbow. It is a tendinopathy injury involving the extensor muscles of the forearm. The lateral epicondylitis is characterized by pain and tenderness at the lateral epicondyle of the humerus as there is non-specific inflammation at the origin of the extensor muscles of forearm.^[1] It is in some cases found in tennis player, different exercises, for example, crushing garments, conveying a bag and so forth are visit responsible.^[1] It is an extra-articular condition believed to be caused by strain or incomplete rupture of the forearm extensor muscles or aponeurotic fibres at their origin respectively.^[2]

Lateral epicondylitis is the most frequent type of myo-tendinosis and can be responsible for substantial pain and loss of function of the affected limb. The consequences of the opposed wrist augmentation reflects diminished strength. Lateral epicondylitis ("tennis elbow") is characterized as pain on the lateral side of the elbow that is aggravated with movements of the wrist, by palpation of the lateral side of the elbow, or by contraction of the extensor muscles of the wrist.^[4]

It is mostly associated with physical work related factors among males and females to combination of higher physical work and lower social support. When there is high physical strain at work and the jobs which include more manual tasking will act as negative prognostic factor at long term period. The more use of computers is also associated with development of this condition. The lateral epicondylitis is major challenge as it is very difficult to treat and prone to recurrence, can last for several weeks or months with typical episode of average duration it would be between six months and two years.^[6]

Methodology:

Study design: Analytical study in which Subjects with age group 18 to 35 year were taken diagnosed with lateral epicondylitis that are recreationally active and fulfill the inclusion criteria. Permission was taken from the institutional ethical committee. All participants were of 18 to 35 years. The required criteria was met by 50 participants (males =24; females = 26), subjects were explained aim and method of the study and written consent was taken. For the assessment of pain, physical function and disability in lateral epicondylitis the Patient Rated Tennis Elbow Evaluation Scale is used. This scale is used to understand the

amount of difficulty the patient had with their arm in the past week. The therapist will describe their average symptoms over past week on a scale 0-10 . Please provide answer for all questions. If the patient did not perform any activity because of pain or because the patient was unable , then they should circle a “10 The grip strength was assessed using the spygmanometer

Participants and Eligibility

Inclusion Criteria: Both males and females, Age group:18 to 35 ,Patient diagnosed with lateral epicondylitis

Exclusion Criteria: Patient with bilateral involvement ,Patient with cervical radiculopathy with involvement of radial nerve

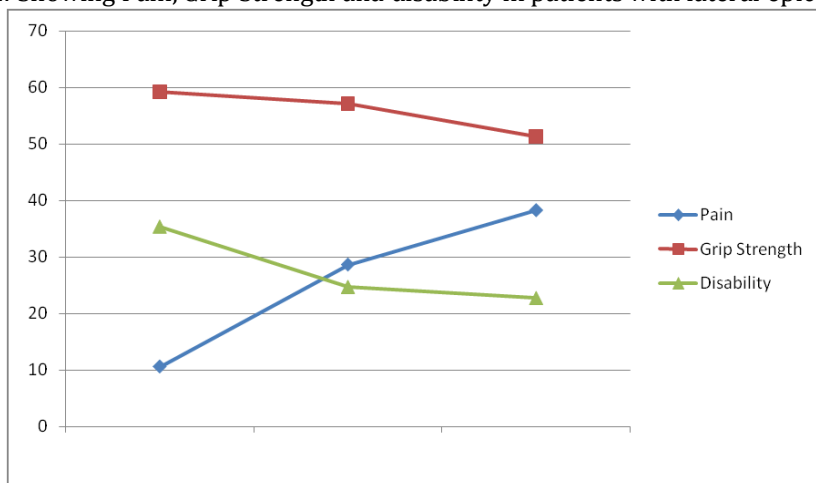
Results:

Our study included 52% males and 48% females, with 74% having right hand dominance and 26% having left handed dominance. Mean age group of 50 patients was 27.76+ 5.4 and mean age of the diagnosis of tennis elbow was 3.41+ 3.5.

Table 1: The Table is showing Mean and standard deviation of Pain, Grip strength and Physical function in mild, moderate and severe pain in patients with lateral epicondylitis.

PAIN	Mean +_SD	GRIP (Mean + SD)	DISABILITY (Mean + SD)
Mild (0-15)	10.6+3.71	59.2+9.64	35.4+22.40
Moderate (15-35)	28.68+4.82	57.08+13.3	24.77+8.45
Severe (35-50)	38.33+ 1.00	51.36+12.26	22.81 +9.56
P value	<0.0001	<0.0001	<0.0001

Graph 2: Showing Pain, Grip Strength and disability in patients with lateral epicondylitis.



Interpretation: The graph suggest that less the pain, better the grip strength. Good physical function score suggesting less the pain, less the disability.

DISCUSSION

In tennis elbow the patient has inflammation in the tendon so there is pain.[7] The tenderness is located to the lateral epicondyle of the humerus. Pain is aggravated when the extensor tendons are stretched for example, by flexing the wrist and fingers with forearm pronated.[1]It is mostly work related or sport related pain syndrome of the arm. The quick and repetitive movements of the wrist and forearm can rupture the proximal attachment of the long extensor muscles also causes inflammation and pain.[7]

Lateral epicondylitis is occupation related disorder it is also caused due to over use or over stress of the wrist extensors of the forearm. The patients has pain and there is decrease in function which affects basic activities in daily life. Hence there is reduction in function so there is disability.[7]

In lateral epicondylitis the chronic symptoms are associated with inadequate muscle power and endurance. The consequent force in LE may due to factors which located near elbow (intrinsic factors) or the factors acting at the distance from the elbow.(extrinsic).[5]

As there is reduction in function leading to disability may affect quality of life as it is also related to the self care , daily life activities , emotional problems , pain etc. In lateral epicondylitis there is increase in severity of pain so there is also increase in functional disability with lower quality of life both physically and mentally .[5]

Lateral epicondylitis is a disorder that causes pain on the outside of the elbow and also there is pain and weakness during gripping.^[8] The number one culprit of lateral epicondylitis is ECRB [extensor carpi radialis brevis] and it becomes vulnerable to shearing stress during performing all the movements of the forearm. The changes can also occur at common extensor origin, extensor digitorum communis [EDC], extensor carpi radialis longus [ECRL].^[9] In lateral epicondylitis due to repetitive movements of the wrist and forearm into supination or pronation, causes micro trauma and tears to the tendon at the common extensor origin. The micro trauma of the tendon stimulates inflammation and repetitive micro trauma will lead to the incomplete healing that causes tendon degeneration.^[9]

CONCLUSION

It is concluded that pain, physical functions are affected, as well as the disability is present in patient with lateral epicondylitis.

LIMITATIONS: Gender was not separated, There is no co-morbid factors, Particular profession was not selected, The acute, sub acute and chronic cases were not separated.

FUTURE SCOPE: In future the co-relation between the pain and physical function can be done, Particular profession can be considered in which tennis elbow incidence is present, Comparison can be done between both male and female in which it is common.

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