

Prevalence of kinesiophobia in treating lateral epicondalgia through physical therapy

Abstract :

Background :Physical treatment (PT) addresses a significant methodology in treating lateral epicondalgia. which is less explored so far, thereby we tried to throw light a bit in little acknowledged area.

Methodology : Review was led in India in patients with lateral epicondalgia alluded to PT. Kinesiophobia was scored with the Tampa Scale of Kinesiophobia (TSK),Patients who agreed for the study were considered with a consent form.

Results: 500 patients with lateral epicondalgia were considered, 45.5% female and 54.5% of males alluded to PT. Patients with fear of movement were essentially more seasoned. A critical increment of PT fulfillment was seen in patients.

Conclusion: Kinesiophobia with lateral epicondalgia who comes for physical management is seen significantly.

Key word: kinesiophobia , lateral epicondalgia ,physical therapy, physiotherapy, injury

Introduction

Physical therapy plays a very vital role in any patient with musculoskeletal pain, and much needed in Lateral epicondalgia patients ^[1-3]. The action and actuation methods of activity based recovery fuse oxygen consuming planning, unequivocal strength activities, dynamic and idle readiness, and proprioceptive systems, all techniques that might impel resulting torment ^[4]. Along these lines, two kinds of anguish can be recognized that should be managed properly: i) fear associated with the outer muscle condition, ii) fear expressly prompted by planning during physiotherapy meetings. Despite continuous care, care-related or procedural torment is underrated in many circumstances, inciting the headway of ideas ^[5]. In desolation conditions, procedural fear is essentially more huge, from one side to the other extending fundamental misery, yet also confining fear the load up reasonability ^[1,6]. The progressing thought of fear of improvement, called kinesio phobia has been made in sidelong epicondalgia ^[7]. Fear avoidance, and especially fear of advancement are critical determinants of continuous PT the board of horizontal epicondalgia ^[8]. Kinesio phobia is considered a person part of an individual, and is more than uneasiness toward advancement since it is a nonsensical, debilitating and pounding tension toward improvement and activity starting from the conviction of delicacy and helplessness to injury. The Tampa Scale of Kinesio phobia assesses dread of advancement/re-injury and has invariance across different clinical circumstances and patient peoples ^[9-12]. Every outline question is given a 4-point Likert scale with scoring decisions going from "immovably conflict" to "unequivocally agree." The TSK comprises thusly a psychometric, clinically-organized characteristic, prognostic and checking device. We speculate that kinesio phobia addresses a confining variable for PT fulfillment, and that kinesio phobia is connected with improvement and with defenseless agony the executives.

Methodology:

Across country multicenter, companion, observational review was led in metropolitan cities of India between on successive patients with lateral epicondalgia visiting a haphazardly chosen test of 500 patients. The convention of review was supported by few physical therapy clinics established in the cities.

Inclusion criteria:

- patient who diagnosed with lateral epicondalgia/tennis elbow.
- Mentally stable
- Patients who were willing to be part of study
- Both females and males
- Age 25-65

These overviews contained portion characteristics, pain level(Numerical Rating Scale (NRS) from 0 (no disturbance) to 10 (most outrageous torment), sort of desolation (very still, on improvement, consistent), torment calming confirmation, torment ampleness were accumulated at the underlying visit, at the seventh recuperation meeting and around the completion of reclamation program .Moreover for the surveys filled during recuperation program contained express inquiries regarding PT meetings like presence of torment during PT meeting (Yes or No) and preceding PT meeting with no adjustment ; satisfaction of PT meetings (Yes/No and numeric rating size of satisfaction from 0 (unsatisfied) to 10 (totally satisfied). At pattern, Kinesiophobia levels were given by the Tampa Scale to Kinesiophobia, (TSK) both by patients and their orthopedicians. Patients were considered having kinesiophobia when TSK score assessed identical to or more unmistakable than 40¹³.

Statistics:

Every one of the elements were considered in assessment, with number (%) of each. t-test was used to contemplate quantitative variables between two consolidated social occasions or Pearson's χ^2 test for relationships of abstract elements. All tests were performed thinking about particular hypotheses. To perceive factors related with kinesiophobia and factors related with the particular organization of physiotherapy-started torment a multivariate vital backslide (utilizing the technique SAS GLIMMIX heterogeneity) with the presentation of results with Odds Ratio (OR), 95% assurance span (CI) and p-values. During the review, 150 orthopedicians took and upheld non-intrusive treatment and exercise based recovery to 500 patients encountering parallel epicondalgia. mean age was 40.2years (SD ± 8.0), 45.5%were female, 65.5% were used or searching for work. rheumatic disorders (12.5%). Most patients (65.7%) had dread achieved by development,25.3% of patients experienced strength, while simply 3.7% experienced torture basically very still. Of the 500 patients in the numeric rating scale (NRS), and mean kinesiophobia score at thought was 45.2.

Kinesiophobia was available in 85% of the patients with lateral epicondalgia, i.e., score from the TSK questionnaire equivalent to or more noteworthy than 40 in the TSK poll. The kinesiophobia score of the patients arrived at the midpoint of 32.4 ± 3.4 in the TSK poll, and 48.7% of the patients had a score somewhere in the range of 40 and 45. More significant level of kinesiophobia was seen in more established patients and in patients with less active work.

RESULTS:

The level of kinesiophobia endured by patients was essentially connected with the degree of introductory torment was altogether ($p < 0.001$), (3.4 ± 1.45) contrasted with the others (4.6 ± 1.6). compared to the patients without kinesiophobia (3.45 ± 1.45 versus 3.2 ± 1.4 , $p = 0.001$).

	Patient without kinesiophobia TSK < 40	Patient with kinesiophobia TSK ≥ 40	p-value
Number of patients	49	459	
Patients expectations of physiotherapy sessions:			NS
Improvement in pain	44%	16%	
Improvement in function	15%	15%	
Improvement in pain, function and others	55%	73%	
Number of patients	145	398	
Number of physiotherapy sessions prescribed on the day of consultation:			0.033 (a)
≤ 10	51%	40%	
> 10	29%	40%	
Number of patients	45	455	
Presence of pain during 7th session: Yes	45%	62%	0.001 (b)
Number of patients	96	459	
Acceptability of pain during 7th session: Yes	98%	78%	not performed
Number of patients	98	431	
Satisfaction on completion of 7th session: Yes	97%	76%	0.003 (b)
Level of satisfaction on completion of 7 th session	6.3 ± 1.05	3.7 ±1.07	0.003 (c)
Number of patients	80	424	
Satisfaction after total sessions prescribed and performed: Yes	73.6%	89.8%	NS
Level of satisfaction after total sessions prescribed	4.2 ± 1.08	5.06 ± 1.0	0.010 (c)

Table 1. Demographic profile

Discussion :

This study was performed to find the effect of kinesiophobia in Physical treatment of lateral epicondalgia. The research shows that kinesiophobia in patients is connected with more distress on improvement, higher power, more prepared age, less work yet what's more with specialists' kinesiophobia. associated with PT isn't constant, simply in one fourth of the patients, more unremitting for patients with kinesiophobia and when orthopedicians have express arrangement.

Kinesiophobia is particularly critical in Musculoskeletal circumstances ^[8], however very few assessments have examined the associations with dread on advancement. This study reports that kinesiophobia is constant in physiotherapy, with a score of kinesiophobia in almost 80% of the patients ^[13-17].with improvement is ordinary in 85.7% of all patients, but was basically associated with kinesiophobia. As in our review, Koho et al ^[14] have found in Finish by and large open that kinesiophobia was related with age, less work. Various examinations didn't find any relationship among's kinesiophobia and power, however it was on worldwide, Vlaeyen ^[18] didn't find or anticipate kinesiophobia. Crombez et al ^[19], suggested that the supposition for dread might be more devastating than the certified disturbance. A few studies have successfully shown that sensation of fear toward improvement and activity related torment were immovably associated: In 232 adults with consistent external muscle activity, Damsgard et al. ^[20] have seen that extended exacerbation during activity was represented by 69% of members, and that kinesiophobia was a basic variable for reporting extended dread during activity, both general activity and exercise, even without a hint of mental misery. In one review Denison et al. ^[21] have recognized and depicted subgroup profiles taking into account self-itemized desolation power, insufficiency, self-suitability, sensation of fear toward development/(re)injury. Three subgroups were perceived "High self-suitability Low fear aversion," "Low self-reasonability Low fear avoidance," and "Low self-sufficiency High fear evasion." The profile plans suggest that different organization techniques may be pertinent in each subgroup. Past investigations have at this point proposed the occupation of specialists' convictions on patients treatment systems.

Finally Lakke et al. ^[22] showed that real experts' kinesiophobic convictions unfavorably sway valuable capacity of sound subjects.Kinesiophobia is frequently examined as a risk factor for torture chronicization, furthermore as a restricting variable of torture the board impacts. Our survey displays that improvement related desolation is huge. Past examinations have focused on the gig of agony the board in the ampleness of rebuilding. In 92 patients, guiding actual expert for consistent MSK misery, Asenl f and S derlund ^[23] have additionally exhibited that changes in kinesiophobia are

more indispensable to provoke treatment results and individual strong change. Kinesiophobia should consequently be tended to in redid torture meds. Senlöp et al. [24] have suggested that kinesiophobia may limit the sufficiency of Exercise based Physical Therapy, stood out from Mental Behavioral Therapy. Additionally, in an audit with patients with progressing shoulder torment Wolfersberger et al. [25] showed that kinesiophobia was connected with a more appalling impression of progress after interdisciplinary strategy including physiotherapy. George et al. [26] moreover highlighted the way that kinesiophobia was connected with non-recovery at a half year after active recuperation.

CONCLUSION :

physiotherapy is fundamental for the arrival of joint and muscle movement in an enormous number of issues. Besides, therapeutic back rub frequently provides recognizable help to patients by lightening the force of excruciating muscle spasms. Exercise is suggested however much of the time, it is related with an increment of pain [27]. Many examinations have underscored the hypo analgesic job of activity [28-30], notwithstanding, this is a worldwide and slow acting impact, contrast with prompt agonizing impact of activity.

There is useless endogenous absence of pain after practice in persistent torment, and creators have underlined the job of forestalling flares [31]. It is typically proposed to recommend analgesic medications prior to working out, as a preplanned treatment of procedural pain as per our study. In our study we support significantly kinesiophobia is present in patients with lateral epicondalgia who are attending for physical therapy.

Consent

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

Source of interest : NIL

CONFLICT OF INTEREST : NIL

REFERENCES :

1. Alami S, Desjeux D, Lefèvre-Colau MM, et al. Management of pain induced by exercise and mobilization during physical therapy programs: views of patients and care providers. *BMC Musculoskelet Disord* 2011;12: 172
2. Kay TM, Gross A, Goldsmith C, Santaguida PL, Hoving J, Bronfort G, Cervical Overview Group: Exercises for mechanical neck disorders. *Cochrane Database Syst Rev* 2005,3:CD004250.
3. Chou R, Huffman LH, American Pain Society, American College of Physicians: Nonpharmacologic therapies for acute and chronic low back pain: a review of the evidence for an American Pain Society/American College of Physicians clinical practice guideline. *Ann Intern Med* 2007,147:492-4.
4. Daenen L, Varkey E, Kellmann M, Nijs J. Exercise, not to exercise, or how to exercise in patients with chronic pain? Applying science to practice. *Clin J Pain*. 2015;31:108-14

5. Czarnecki ML, Turner HN, Collins PM, Doellman D, Wrona S, Reynolds J. Procedural pain management: a position statement with clinical practice recommendations. *Pain ManagNurs*. 2011;12:95-111.
6. Perrot S, Laroche F, Poncet C et al. Are joint and soft tissue injections painful? Results of a national French cross-sectional study of procedural pain in rheumatological practice. *BMC Musculoskelet Disord* 2010; 11: 16
7. Kori SH, Miller RP, Todd DD. Kinesiophobia: A new view of chronic pain behavior. *Pain Management*. 1990;3:35–43.
8. Vlaeyen JWS, Linton SJ. Fear-avoidance and its consequences in chronic musculoskeletal pain: a state of the art. *Pain* 2000;85:317–32.
9. Woby SR, Roach NK, Urmston M, Watson PJ. Psychometric properties of the TSK-11: A shortened version of the Tampa Scale for Kinesiophobia. *Pain*. 2005;117:137–144.
10. Houben RMA, Leeuw M, Vlaeyen JWS, Goubert L, Picavet HSJ. Fear of Movement/Injury in the General Population: Factor Structure and Psychometric Properties of an Adapted Version of the Tampa Scale for Kinesiophobia. *J of Behavioral Medicine*. 2005;28:415–424.
11. Roelofs J, Sluiter JK, Frings-Dresen MH, et al. Fear of movement and (re)injury in chronic musculoskeletal pain: Evidence for an invariant two-factor model of the Tampa Scale for Kinesiophobia across pain diagnoses and Dutch, Swedish, and Canadian samples. *Pain*. 2007;131:181–190.
12. Roelofs J, van Breukelen G, Sluiter J, et al. Norming of the Tampa scale for kinesiophobia across pain diagnoses and various countries. *Pain*, 2011; 152: 1090-1095
13. Vlaeyen JW, Seelen HA, Peters M, et al. Fear of movement/(re)injury and muscular reactivity in chronic low back pain patients: an experimental investigation. *Pain* 1999;82:297-304.

14. Koho P, Borodulin K, Kautiainen H, Kujala U, Pohjolainen T, Hurri H. Finnish version of the Tampa Scale of Kinesiophobia: Reference values in the Finnish general population and associations with leisure-time physical activity. *J Rehabil Med.* 2015;47:249-55.
15. Vlaeyen JW, Kole-Snijders AM, Boeren RG, van Eek H. Fear of movement/(re)injury in chronic low back pain and its relation to behavioral performance. *Pain.* 1995;62:363-72.
16. Crombez G, Vlaeyen JW, Heuts PH, Lysens R. Pain-related fear is more disabling than pain itself: evidence on the role of pain-related fear in chronic back pain disability. *Pain.* 1999;80:329-39.
17. Fletcher C, Bradnam L, Barr C. The relationship between knowledge of pain neurophysiology and fear avoidance in people with chronic pain: A point in time,observational study. *Physiother Theory Pract.* 2016;32:271-6.
18. Damsgard E, Thrane G, Anke A, Fors T, Røe C. Activity-related pain in patients with chronic musculoskeletal disorders. *Disabil Rehabil.* 2010;32:1428-37.
19. Denison E, Asenlöf P, Sandborgh M, Lindberg P. Musculoskeletal pain in primary healthcare: subgroups based on pain intensity, disability, self-efficacy, and fear-avoidance variables. *J Pain.* 2007;8:67-74.
20. Coudeyre E, Rannou F, Tubach F, et al. General practitioners' fear-avoidance beliefs influence their management of patients with low back pain. *Pain.* 2006;124:330-7.
21. Poiraudreau S, Rannou F, Baron G, et al. Fear-avoidance beliefs about back pain in patients with subacute low back pain. *Pain.* 2006;124:305-11.
22. Lakke SE, Soer R, Krijnen WP, van der Schans CP, Reneman MF, Geertzen JH. Influence of Physical Therapists' Kinesiophobic Beliefs on Lifting Capacity in Healthy Adults. *PhysTher.* 2015;95:1224-33.

23. Asenlöf P, Söderlund A. A further investigation of the importance of pain cognition and behaviour in pain rehabilitation: longitudinal data suggest disability and fear of movement are most important. *Clin Rehabil.* 2010;24:422-30.
24. Senlöf P, Denison E, Lindberg P. Long-term follow-up of tailored behavioural treatment and exercise based physical therapy in persistent musculoskeletal pain: A randomized controlled trial in primary care. *Eur J Pain.* 2009;13:1080-8.
25. Wolfensberger A, Vuistiner P, Konzelmann M, Plomb-Holmes C, Léger B, Luthi F. Clinician and Patient-reported Outcomes Are Associated With Psychological Factors in Patients With Chronic Shoulder Pain. *Clin Orthop Relat Res.* 2016;474:2030-9.
26. George SZ, Beneciuk JM. Psychological predictors of recovery from low back pain: a prospective study. *BMC Musculoskelet Disord.* 2015;16:49.
27. Meeus M, Hermans L, Ickmans K, et al. Endogenous pain modulation in response to exercise in patients with rheumatoid arthritis, patients with chronic fatigue syndrome and comorbid fibromyalgia, and healthy controls: a double-blind randomized controlled trial. *Pain Pract.* 2015;15:98-106.
28. Koltyn KF, Brellenthin AG, Cook DB, Sehgal N, Hillard C. Mechanisms of exercise-induced hypoalgesia. *J Pain.* 2014;15:1294-1304.
29. Verhoeven F, Tordi N, Prati C, Demougeot C, Mougin F, Wendling D. Physical activity in patients with rheumatoid arthritis. *Joint Bone Spine.* 2016;83:265-70.
30. Lawand P, Lombardi Júnior I, Jones A, Sardim C, Ribeiro LH, Natour J. Effect of a muscle stretching program using the global postural reeducation method for patients with chronic low back pain: A randomized controlled trial. *Joint Bone Spine.* 2015;82:272-7.

31. Nijs J, Kosek E, Van Oosterwijck J, Meeus M. Dysfunctional endogenous analgesia during exercise in patients with chronic pain: to exercise or not to exercise? *Pain Physician*. 2012;15(3 Suppl):ES205-13.

