Orthopedics and Rheumatology
Open Access Journal
ISSN: 2471-6804

Letter to Editor
Volume 23 issue 4 - July 2024
DOI: 10.19080/OROAJ.2024.23.556117

Ortho & Rheum Open Access J

It Is Time to Use New Provocation Tests for the Clinical Diagnosis of Lateral Elbow Tendinopathy

Stasinopoulos Dimitrios*

Associate Professor, Department of Physiotherapy, Faculty of Health and Caring Sciences, university of West Attica, Greece

Submission: June 20, 2024; **Published:** July 03, 2024

***Corresponding author:** Stasinopoulos Dimitrios, Associate Professor, Department of Physiotherapy, Faculty of Health and Caring Sciences, university of West Attica, Greece

Keywords: Lateral Elbow Tendinopathy; Clinical diagnostic test; Intrasubstance tear; Best therapeutic; Clinical manifestations

Abbreviations: LET: Lateral Elbow Tendinopathy; US: Ultrasound; IST: Intrasubstance Tear

Letter to Editor

Dear Editor,

Lateral Elbow Tendinopathy (LET) is the most common tendinopathy in the elbow area. It is defined as a cause of pain in the area of lateral epicondyle [1]. The main complaints of LET patients are decreased function and pain [1,2]. Both symptoms affect daily activities. Pain can be reproduced in one of the following ways: (1) palpation on the facet of the lateral epicondyle; (2) with the elbow in extension, resisted with the elbow in extension, resisted wrist extension, and/or resisted middle-finger extension; (3) with the elbow in extension and passive flexion of the wrist and (4) gripping activities [1-3]. The literature-based and clinical approach mainly uses provocation tests due to the lack of a true gold standard for diagnosing LET even if ultrasound has been widely utilized as a reference standard in diagnosing LET that exacerbates epicondylar pain to diagnose cases of suspected LET [4]. A recent systematic review found that Cozen's test had the highest sensitivity at 91%, followed by Mill's test at 76% and Maudsley's test at 70%; however, the specificity of these tests is generally low [5].

Although numerous clinical tests for LET are described in the literature reproducing LET pain as described above, two recent novel diagnostic clinical tests could be a valuable addition to the diagnostic process, potentially improving the accuracy of the clinical diagnosis of LET. One clinical diagnostic test is called the Index test and the other clinical diagnostic test is called the Shelfie test.

In the Index test [6], the patient is positioned in a sitting position with the shoulder slightly abducted, elbow flexed to 90°, forearm pronated, and wrist flexed so that the palm will face downwards. Then, the examiner stood beside the patient's affected side and resisted the maximum wrist extension effort. While maintaining this position, failure to resist the maximum wrist extension effort indicated a positive sign of this new physical maneuver.

In the Shelfie test [7], the patient is either seated or standing, holding a cell phone with his/her elbow fully extended. The wrist is then flexed, and the patient is asked to press his/her thumb independently on the phone screen or top button (simulating the maneuver of taking a selfie picture). Pain over the lateral aspect of the elbow joint indicated a positive test.

The index test presented very good sensitivity and good accuracy in patients with LET with ultrasound (US) diagnostic confirmation of intrasubstance tear (IST) [6]. IST is the final phase of the degenerative tissue process and detecting IST is crucial in determining the best therapeutic outcomes in patients with LET. Although numerous clinical tests for the clinical diagnosis of LET exist, the Cozen test is the only clinically recommended test by the United Kingdom Health Safety Executive Workshop to diagnose LET even if the diagnostic accuracy of this test is limited [8]. However, the Cozen test is not the best physical maneuver in patients with IST suspected.

LET patients describe sleep disturbance as a key impact of the condition [9]. This is a novel finding since previous studies suggest that disturbed sleep is rarely associated with LET [10]. Tendon tear cause severe nocturnal pain [6]. The index test and nocturnal pain presented very good sensitivity and good accuracy in patients with IST [6].

The diagnosis of LET often involves the use of clinical diagnostic tests, which are subjective and rely on the skill and experience of the physician conducting the examination [7]. The Shelfie test allows patients to perform the assessment themselves. For this editorial, it will called active test. Active testing is a crucial component of telemedicine that refers to the delivery of healthcare services through telecommunication and digital technologies [11]. The advancement of telemedicine and the need for rapid diagnoses without a physical examination by a physician are gaining momentum and becoming a significant aspect of the diagnostic process. As such, it is essential to develop new tools and tests such as the Shelfie test that are adapted to our changing daily activities.

Therefore, it is time to change the clinical diagnosis of LET. The accuracy of the common clinical tests such as Mill's, Cozen's, Maudsley's, and so on for the LET diagnosis is limited. Not all patients with LET will experience pain during the commonly used clinical tests, which can result in false negative results. Conversely, some patients may experience pain during the tests due to other underlying conditions, such as arthritis or nerve entrapment, which can lead to false positive results [7]. LET patients will perform the Selfie Test.

In addition, by closely simulating a patient's everyday movements and activities, an active test such as the Selfie Test aids in pinpointing the genuine source of pain without necessitating the presence of an external examiner. This may enhance diagnostic accuracy and provide valuable insights into the LET [7]. Evaluation of the patients is important because patients misattribute the causes of their pain, as well as some patients relate the cause of decreased function to other comorbid health conditions in the affected arm, such as shoulder pain or carpal tunnel syndrome, which are commonly associated with LET [12-14]. However, if the patient complains of nocturnal pain, the Index test will be performed by a physician to confirm the LET clinical diagnosis with IST. Finally, these two tests were not focused on pain scores, evolution times, physical activity levels, comorbidities, and other clinical manifestations.

References

1. Bisset LM, Vicenzino B (2015) Physiotherapy management of lateral epicondylalgia. J Physiother 61(4): 174-181.
2. Coombes BK, Bisset L, Vicenzino B (2015) Management of Lateral Elbow Tendinopathy: One Size Does Not Fit All. J Orthop Sports Phys Ther 45(11): 938-949.
3. Dimitrios S (2016) Lateral elbow tendinopathy: Evidence of physiotherapy management. World J Orthop 7(8): 463-466.
4. Krogh TP, Fredberg U, Ammitzboll C, Ellingsen T (2020) Clinical value of ultrasonographic assessment in lateral epicondylitis versus asymptomatic healthy controls. Am J Sports Med 48(8): 1873-1883.
5. Karanasios S, Korakakis V, Moutzouri M, Drakonaki E, Koci K, et al. (2021) Diagnostic accuracy of examination tests for lateral elbow tendinopathy (LET)-A systematic review. J. Hand Ther 35(4): 541-551.
6. Greene C, Droppelmann G, García N, Jorquera C, Verdugo A (2022) A New Test for the Advanced Diagnosis of Lateral Elbow Tendinopathy with Concomitant Intrasubstance Tear: Failure to Resist Extension Effort (the Free Test). Orthopedic Research and Rev 14: 495-503.
7. Factor S, Snopik PG, Albagli A, Rath E, Amar E, et al. (2023) The "Selfie Test": A Novel Test for the Diagnosis ofLateral Epicondylitis. Medicina 59(6): 1159.
8. Palmer K, Walker-Bone K, Linaker C, Reading I, Kellingray S, et al. (2000) The Southampton examination schedule for the diagnosis of musculoskeletal disorders of the upper limb. Ann Rheum Dis 59(1): 5-11.
9. Bateman M, Hill JC, Cooper K, Littlewood C, Saunders B (2023) Lived experience of people with lateral elbow tendinopathy: a qualitative study from the OPTimisE pilot and feasibility trial. BMJ Open 13(8): e072070.
10. Walker-Bone K, Palmer KT, Reading I, David C, Cyrus C (2004) Prevalence and impact of musculoskeletal disorders of the upper limb in the general population. Arthritis Rheum 51(4): 642-651.
11. Grandizio LC, Foster BK, Klena JC (2020) Telemedicine in Hand and Upper-Extremity Surgery. J Hand Surg Am 45 (3): 239-242.
12. Titchener AG, Fakis A, Tambe AA, Smith C, Hubbard CC, et al. (2013) Risk factors in lateral epicondylitis (tennis elbow): a case-control study. J Hand Surg Eur 38(2): 159-164.
13. Lemmers M, Versluijs Y, Kortlever JTP, Amanda IG, David R (2020) Misperception of disease onset in people with gradual-onset disease of the upper extremity. J Bone Joint Surg 102: 2174-2180.
14. van Hoorn BT, Wilkens SC, Ring D (2017) Gradual onset diseases: misperception of disease onset. J Hand Surg Am 42(12): 971-977.

How to cite this article: Stasinopoulos D. It Is Time to Use New Provocation Tests for the Clinical Diagnosis of Lateral Elbow Tendinopathy. Ortho & Rheum Open Access J. 2024; 23(4): 556117. DOI: 10.19080/OROAJ.2024.22.556117

DOI: 10.19080/OROAJ.2024.22.556117

How to cite this article: Stasinopoulos D. It Is Time to Use New Provocation Tests for the Clinical Diagnosis of Lateral Elbow Tendinopathy. Ortho & Rheum Open Access J. 2024; 23(4): 556117. DOI: 10.19080/OROAJ.2024.22.556117