

Positive rate of horizontal flexion test for healthy subjects of visual display terminal worker

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Introduction

- Lateral epicondylitis is a typical disease of the pain occurring around the elbow joints.
- In recent years, lateral epicondylitis due to deskwork other than tennis players has been increasing and it seems important to consider the characteristics of healthy people engaged in desk work.
- Therefore, the purpose of this study is to investigate the positive rate of the horizontal flexion test in healthy people engaged in visual display terminals

Subjects and Methods

- Desk work group are 32 subjects (16 male and 16 female, age 30 - 50) who is office staff of the university.
- 15 subjects (16 male and 16 female, age 30- 50) are non-desk work group. They do not occupation desk work.
- All subjects have no history of dysfunction or movement disorder in upper limb within 1 year.
- Both groups are targeted for those who have negative provocative tests of tennis elbow.
- Subjects who are operating personal computers for 4 hours or more per day are set as desk work groups.
- Horizontal flexion test (figure 1) is a test which fixes angulus inferior scapulae and carries out level adduction of the humerus, reflecting the muscle tonus of teres major.



Analysis

- Sensitivity = true positives / true positives + false negatives × 100%
- Specificity = true negatives / false positives + true

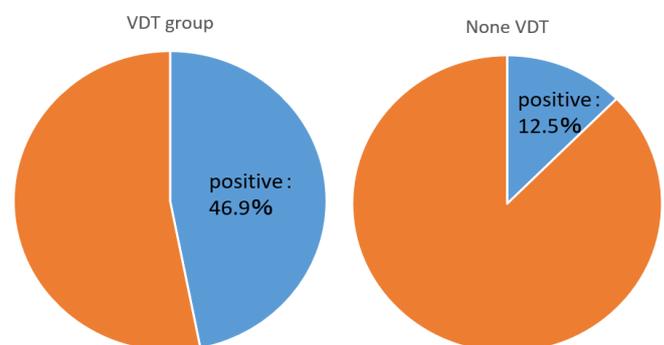
negatives × 100%

- Comparison between specificity of VDT workers and none VDT workers, we measured 2×2 contingency table test.

	Reference Standard Positive	Reference Standard Negative
Clinical test positive	True positives a	False positives b
Clinical test negative	False negatives c	True negatives d
	Sensitivity = a/(a+c)	Specificity = d/(b+d)

Results

- In present study , 15 people of desk work group were positive, positive rate was 46.9%, 4 of non-desk work group were positive. It was 12.5%.
- Moreover, positive rate of desk work group were significantly different than non-desk work group (p = 0.0026).



Discussion

- Although the upper limb alignment during VDT work is an inner limb in the upper limbs, since the teres major muscle is a muscle that contributes to static stability connecting the scapula and the upper limbs, it is reported that it contracts constantly for maintaining posture. It is presumed that this causes excessive tension of the teres major muscle, the flexibility of the muscles is reduced, and the movement range restriction appears in the horizontal adduction of the shoulder joint.