



The Effect of Postural Correction and Exercise on Neck Pains in Cell Phone Users

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OBJECTIVES

Using a cell phone in the head forward posture for a long time is a risk factor for the induction of trigger points (TP) and myofascial pain syndromes (MPS)¹.

The purpose of this study was to evaluate the association between cell phone use-related neck pain and MPS in the trapezius, sternocleidomastoideus, and levator scapulae (LS) muscles as well as to determine appropriate prevention and treatment approaches.

MATERIALS and METHODS

Patients were randomly divided into two groups as group 1 [treatment group(n=21)], and group 2 [control group (n=28)].

Both group's neck pain severity was measured via Visual Analog Scale. Also, Taut band existence and TP pain severity were evaluated in the different locations on trapezius, sternocleidomastoideus, and LS muscles (figure 1,2,3, and 4). In addition, neck pain severity and range of motion (ROM) were assessed.

Group 1 received a structured exercise program and posture correction advice, whereas group 2 did not receive any treatment. The patients were re-evaluated after one month, and these parameters were compared with those at the first examination.

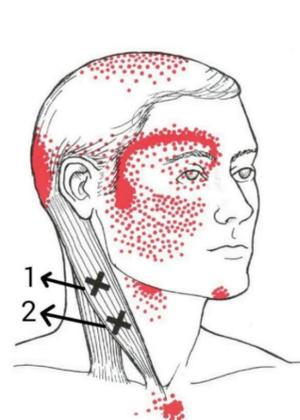


Figure 1. M.Sternocleidomastoideus².

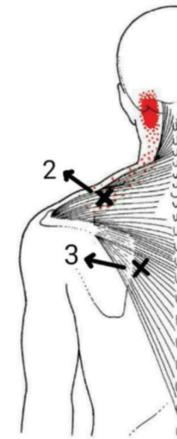


Figure 3. M.Trapezius 2nd & 3rd trigger points².

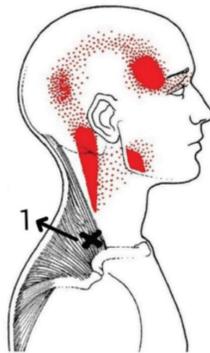


Figure 2.1:M.Trapezius 1st trigger point².

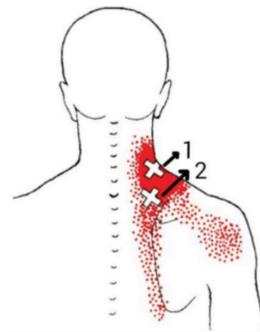


Figure 4. M.Levator Scapulae 1st & 2nd trigger points².

RESULTS

47 patients (27 males, 20 females) completed the study. Two patients from group 2 were eliminated. Cell phone using for a long time and in the wrong posture was found one of the main aggravating factors of neck pains(Table 1).

In group 1, the neck pain score was found to be significantly decreased ($p < 0.001$) (Table 2), and the taut band of the right LS muscle have significantly disappeared ($p = 0.004$).

Age (years)	27.6 ±7.4
Aggravating factors of pain	
Phone using	58.7% (n=27)
Others	41.3% (n=19)
Daily phone usage (hours)	
<3	29.8% (n=14)
3-6	46.3% (n=22)
>6	21.3% (n=10)
Number of years since regular cell phone using (years)	
<10	36.2% (n=17)
10-20	55.3% (n=26)
20>	8.5% (n=4)
Posture during phone use	
Sit and bend forward	78.7%(n=37)
Lie on back	8.5% (n=4)
Both	12.8% (n=6)

Table 1. Patient data and pain characteristics

A significant decrease in TP pain severity was found on the 2nd point of the left sternocleidomastoideus ($p = 0.039$), left trapezius ($p = 0.031$), and right LS ($p = 0.012$) muscles. In addition, a borderline decrease was found in the 2nd point of the left LS muscle in group 1($p = 0.056$).

On the other hand, there were no significant changes in terms of neck pain score, taut band existence, and TPs pain severity in group 2.

	1st measurement	2nd measurement	P Value
Group 1	43.3±16.3	21.9±13.3	$P < 0.001^*$
Group 2	37.0±16.9	30.3±15.3	$P = 0.123$

Table 2. VAS pain score at the 1st and 2nd measurement (Mean ± SD (mm))

Pain and limitation of ROM showed no significant difference between the first and second examinations in both groups.

CONCLUSIONS

Cell phone using rates have increased in recent years. As a result of this, the number of people who have cell phone use-related neck pain complaints has been on the rise³. Limiting the duration of mobile phone usage and correcting forward head position by increasing awareness should be recommended. Furthermore, performing structured neck exercise program on a regular basis can be helpful to prevent the development and treatment of text neck syndrome.

REFERENCES

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