Original Article

Cervicogenic headache and neck pain among computer users

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Objective: To find the prevalence of cervicogenic headache and neck pain in computer users.

Methodology: An online survey was conducted with the help of self-developed questionnaire, which was developed with the help of Google form. We selected randomly 200 emails address from University of Sargodha employees and sent the questionnaire via email. We also requested the participants on social media to participate in the study. We received 119 responses in one month. Percentages and descriptive statistical tools were used to analyze the data.

Results: Out of 119 individuals, 87(73.1%) had pain in their body in most days of month. Out of 119 individuals, 69(58%) had pain in head and neck. 57.1% used computer on chairs and sofa with back supported. Out of 119, 108 persons thought that their pain was due to wrong posture while using computer and laptops.

Conclusion: Prevalence of head and neck pain is increasing among computer users. The most common cause may be prolonged use of laptop and computer in wrong posture. (Rawal Med J 202;45:370-372).

Keywords: Headache, pain, cervicogenic, computer, laptop, posture.

INTRODUCTION

About 47 percent of the global population suffers from some type of headache and 15 to 20% have cervicogenic type of headache.[1] About 2 to 3 percent of the total world population suffers from cervicogenic headache.[2] It is 4 times more common in females.[3] Cervicogenic headache is pain that is originated from upper cervical vertebra due to compression of sensory nerve that supply of scalp.[4] Soft tissue around the neck, fascia, and disc are all sensitive structures that can initiate the cervicogenic headache.[5] Many patients with cervicogenic headache are misdiagnosed with cluster headache and migraine.[6] Many patients with cervical spondylosis are complaint the head pain, and this pain is also cervicogenic.[7]

People with forward head posture and computer users have more complain of headache.[8] Pain follows a typical pattern, started with tightness in upper cervical vertebrae and muscles around the neck, then rises in posterior scalp and travel to anterior. Heat, massage, traction, transcutaneous nerve stimulation, and range of motion exercises for cervical spine all have effectiveness.[9] Cervicogenic headache is associated with fatty infiltrate in neck muscles,[10] and may be associated with excessive day time sleepiness.[11] Most of computer user do not use adjustable height and key board,[12] and neck pain in them is associated with forward head posture.[13] Objective of present study was to find the prevalence of carcinogenic headache and neck pain in computer users.

METHODOLOGY

In this online survey, a self developed questionnaire was used which was developed with the help of Google form. A pilot study was conducted to evaluate the reliability and validity of the questionnaire. 200 email addresses were selected randomly from University of Sargodha employees. We also requested the participants on social media to participate in this study. We received 119 responses in one month.

Ethical clearance was taken from institutional research board. There was no conflict of interest and an informed consent was taken at the time of collection of data from each participants. Percentages and descriptive statistical tools were used to analyze the data.

RESULTS

Out of 119 subjects, there were 61.3% female and 38.7% male. Mean age was 28.34 years (range 18-55). In the study. 42.9% were students, 28.6% teachers, 5.9% researchers, 2.14% bankers and 19.3% were from other professions. 21% were using computer for more than six hours daily and 13.4% five hours daily. The computer was used by 42.9% for educational purpose, 19.3% for recreational purpose, 16% for research purpose and 25% for professional purpose. About 40% rated the intensity of pain between 4 and 6 (out of 10).

Table 1. Posture in computer use.

Posture	Number	%
Especially design height adjustable chair and table	7	5.9
Lying	12	10.1
On floor	1	.8
Sitting on bed back not supported	30	25.2
Sitting on chair/sofa, back supported	69	57.9

Table 2. Frequency of pain in body.

Do you feel pain in your body most days of months?	Number	%
Yes	88	73.9
No	31	26.1

Table 3. Part of body affected.

Part of body	Number	%
Head and neck	69	58
Lower back	22	18.5
Upper neck	22	18.5
Leg	4	3.4
Foot and ankle	2	1.7

Table 4. Do you think your pain is due to wrong posture while using computer?

Do you think your pain is due to wrong posture while using computer	Number	%
Yes	108	90.8
No	11	9.20

Mostly participants (58%) used computer in sitting on chair or sofa (Table 1). We found that 74% participants felt pain in their bodies in most days of the months (Table 2) and 58% feel pain in head and neck (Table 3). We found that 90.8% are aware that their pain was due to wrong posture during the use of laptops and computer (Table 4).

DISCUSSION

Results of this study showed that about 58% of the population that used computer and laptop was suffering from head and neck pain. This is similar to a study by Malinska and Bugajaska published in 2015.[12] Some other studies reported that forward head postures during the work on computer caused the balance problems.[14,15] According to a national study, 72% had neck pain that used computer for prolonged period of time.[16] Result of this study is nearly similar to this study i.e. 69% have neck pain in computer users.

Another study reported prevalence of neck pain among computer users to be 28%.[17] This is much lower than our study; their sample size was only 50. Most participants in our study used computers and laptops more than six hours daily. Six hours daily use of computer is sufficient to produce postural and ocular syndromes in users.[18,19] Average discomfort is in 20 minutes.[20] In this study, 58% used computer in sitting on chair or sofa. A little adjustment can make huge difference among computer users.

During the computer use, there is increased neck flexion and head tilt, causes compression among the vertebras and strain in tissues.[20] In this study, 90.8% were aware that their pain was due to wrong posture during the use of laptops and computer. Bad postures are contributing factor in discomforts and fatigue in activities of daily life.[21] A study concluded that most of computer users do not use adjustable height and key board and the most frequents complains among the computer workers was headache, neck pain and low back pain.[12] Results of our study also similar to a study in which they concluded that neck pain among computer worker is associated with forward head posture.[13]

CONCLUSION

Prevalence of head and neck pain is increasing among computer users. The most common cause may be prolonged use of laptop and computer in wrong posture.

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Conception and design: Farjad Afzal
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Analysis and interpretation of the data: Farjad Afzal, Akhtar Rasul
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