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LETTER TO THE EDITOR

LIST DO REDAKCJI

DIGITAL EYE STRAIN AS A GLOBAL PROBLEM RELATED TO THE COVID-19 PANDEMIC

CYFROWE ZMĘCZENIE OCZU JAKO GLOBALNY PROBLEM ZWIĄZANY Z PANDEMIĄ COVID-19

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Dear Editor,

We have recently read an article that surprised us with its results. Basnet et al. [1] conducted research on the incidence of digital eye strain during the COVID-19 pandemic. The occurrence of this type of symptoms in almost 95% of the respondents extremely shocked us [1]. We decided to explore this topic because we believe it is a global problem. Patient education is needed on how to reduce the risk factors associated with eye strain and assistance in alleviating the unpleasant symptoms of this condition.

As a result of the outbreak of the COVID-19 pandemic, interpersonal contacts in both school, professional and private spheres were replaced by an alternative way, i.e. electronic connections. This has forced many people to spend most of their time in front of computer and mobile phone screens. A set of symptoms characterized by bothersome eye symptoms resulting from long-term use of various types of screens at a very short distance from the eyes is called Digital Eye Strain (DES). These include burning or pain in the eye, tearing, foreign body sensation and redness [1-3].

A clinical trial conducted in Nepal in 2021 [1] included a group of 322 adults over the age of 20 who reported using screens for at least one hour a day for the previous several months. They were asked to complete a research questionnaire containing questions about the symptoms of eye strain when using digital devices. The participants were also asked about the use of corrective glasses including filters and other measures used to prevent the symptoms of eye fatigue. It was found that the incidence of eye strain in this group was 94.3%. Eye strain, defined as irritation and a feeling of heaviness, was the most common symptom, and others included: tearing, blurred vision, dry eyes, and redness. There were also abnormalities in other organs, such as headache, neck and shoulder pain. Most of the respondents declared that the time they spent in front of the screens of digital devices was in the range of 2-4 hours. In order to reduce eye discomfort, respondents most often took breaks from working in front of the screen [1].

Other studies also confirm that increased time spent in front of a computer during the COVID-19 pandemic is associated with DES [2,3]. What is disturbing is that this problem also affected children who were attending online classes at that time [3].

Digital eye strain is one of the global effects of the lifestyle forced by the COVID-19 pandemic. It is estimated that approximately 60 million people around the world suffer from it [1]. This significantly reduces the quality of life, especially for people who use digital devices in their professional work. Social campaigns are needed to raise awareness of the negative impact of screens on our vision.

References:

1. Basnet A, Pathak SB, Marasini A, Pandit R, Pradhan A. Digital eye strain among adults presenting to tertiary care hospital in the era of COVID-19 pandemic: a

descriptive cross-sectional study. JNMA J Nepal Med Assoc. 2022; 60(245): 22-25. https://doi.org/10.31729/jnma.7092

2. Almalki AM, Alblowi M, Aldosari AM, Khandekar R, Al-Swailem SA. Population perceived eye strain due to digital devices usage during COVID-19 pandemic. Int Ophthalmol. 2023; 43(6): 1935-1943. https://doi.org/10.1007/s10792-022-02593-y
3. Demirayak B, Yılmaz Tugan B, Toprak M, Çinik R. Digital eye strain and its associated factors in children during the COVID-19 pandemic. Indian J Ophthalmol. 2022; 70(3): 988-992. https://doi.org/10.4103/ijo.IJO_1920_21