Headaches Associated with Face Mask Use During COVID-19 Pandemic-Are We Seeing a Headache Epidemic?

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Received: 15 April 2021 / Accepted: 10 May 2021 / Published online: 20 May 2021
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Abstract COVID-19 has disrupted daily life and has affected the whole community. The healthcare workers have been at high risk caring for the suspected and confirmed COVID-19 patients across the globe. COVID-19 challenges have forced everyone to adopt a different lifestyle and there has been stress on hand hygiene, social distancing, and regular usage of PPE kits. Continuous use of face masks and respirators has resulted in a variety of symptoms of which headache forms a major part by all healthcare professionals as well as the patients. So the question is are we seeing a silent headache epidemic? In the letter, we have discussed the various types of headaches secondary to regular use of face masks and respirators, the extent to which it has affected the whole community, the growing threat of a silent epidemic, and measures to combat the same. We believe the measures described will help to curb the burden of headaches in the whole community.

Keywords Headache · Face mask · COVID-19

Work was carried out at- Aravind eye hospital and post graduate institute of Ophthalmology, Cuddalore main road, Thavalukuppam, Pondicherry, India

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Dear Editor,

The global COVID-19 pandemic has affected the whole community and frontline healthcare workers have been at high risk caring for suspected or confirmed COVID-19 patients in all major hospitals. Since the onset of pandemic, apart from social distancing and hand hygiene, there has been growing stress on regular usage of person protective equipment's (PPE) including face mask to prevent aerosol and droplet spread of virus. Donning of PPE for long periods during the outbreak of COVID-19 has resulted in variety of signs and symptoms like headache, nausea, hypoxia, sweating and breathlessness [1]. The question is aren't we neglecting all these symptoms of which headache has been a major complaint by all professionals. Are we seeing a silent headache epidemic?

Literature reviews shows that sustained external compression of pericranial soft tissues by tight bands or straps around the head may result in severe headache (helmet, tight cloths, protective or swimming goggles, face mask, etc.). A large number of studies have reported de novo headache associated with face masks. Earlier reports have highlighted that if snugly fit N95 face was used for a prolonged period it resulted in ocular pain, headache, facial pain mimicking trigeminal neuralgia and ear lobe irritation and discomfort. Lim et al. [2], reported new onset face mask-associated headaches with a prevalence rate of 37.3% among healthcare providers wearing the N95 face mask during the 2003 severe acute respiratory distress syndrome (SARS) epidemic in Singapore. Similarly Atay et al. [3] reported headache as one of the main symptoms accounting for less compliance of N95 face mask compliance among nurses working in a medical intensive care unit. Headache during PPE use has been divided as pre-existing or de novo headache. The various type of headache can be pressure induced, cervicogenic, tension type and trigeminal

neuralgic type. The pathogenesis behind this headache could be mechanical compression, hypoxia, rebreathing of carbon dioxide, stress or aggravation of pre-existing headache. Another school of thought is irritative effect on the underlying superficial sensory nerves by tractional forces. The cervical neck strain from donning may activate the trigeminocervical complex and result in nociceptive pain through transmission to higher brain centres. In a nutshell, the COVID-19 pandemic has given birth to different epidemics including headache. Headache as a complaint should not be neglected and we have to find solutions to prevent it. The various suggestion to reduce this are adequate hydration, frequent reposition of masks to reduce mechanical burden, self-massage under the scalp in the area of tenderness, breathing in a open space, neck support in case of excess pain, adequate nutrition, lemonade drink and breathing exercises. We believe that these recommendations will help to prevent this silent headache beside combating the deadly COVID-19 infection.

Acknowledgements Aravind Eye Hospital and Post Graduate Institute of Ophthalmology, Pondicherry.

Funding None.

Declaration

Conflicts of interest There are no conflicts of interest.

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