



PREVALENCE OF POST COVID HEADACHE AMONGST HEALTH CARE PROFESSIONALS: A DESCRIPTIVE OBSERVATIONAL STUDY FROM BALLARI, KARNATAKA

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ABSTRACT **Background:** Post-COVID headache is a persistent headache that develops after having COVID-19. Symptoms can last for weeks or even months after testing negative for the virus. Though anyone can develop post-COVID headache, people with migraine are more likely to see an increase in the frequency and intensity of their migraine attacks. **Objective:** To study the prevalence and characteristics of post covid headache. **Methodology:** The present Descriptive observational study was carried out at Department of General Medicine, VIMS Ballari involving 100 post covid health professionals. **Results:** 95% of the patients were from 20-30 years age group with mean age as 35.1±6.5 years. 57% were males and 43% were females. Prevalence of post covid headache as 75%. Out of 75 cases of headache, majority had secondary type of headache i.e. 50 (66.7%). Remaining 25 i.e. 33.3% had primary type of headache. Majority of the cases had unilateral headache i.e. 49.3%. Characteristics of headache revealed that majority had throbbing and pulsating type of headache i.e. 46.7% followed by 44% had tightness/band like sensation, 4% had pounding like sensation, 2.7% had severe hitting type of headache and 1.3% can't describe the same. **Conclusion:** Prevalence of post covid headache as 75%. Majority had secondary type of headache i.e. 50 (66.7%). Majority had unilateral headache i.e., 49.3%. Majority had throbbing and pulsating type of headache i.e., 46.7%.

KEYWORDS : Post covid 19 headache, health care professionals, etc.

Introduction

With the alpha, delta and omicron variants, headache has been a common symptom of SARS-CoV2 (COVID-19). However, a headache that doesn't go away after having COVID-19 could be a sign that you're fighting post-COVID headache. Although it seems like the pandemic has been with us forever, in medical terms, it is too soon to make any predictions about the characteristics and treatment of the headache that COVID-19 causes with much certainty. Headache is a common feature during acute illness, and it is not surprising since headache often accompanies many viral illnesses.¹

Post-COVID headache is a persistent headache that develops after having COVID-19. Symptoms can last for weeks or even months after testing negative for the virus. Though anyone can develop post-COVID headache, people with migraine are more likely to see an increase in the frequency and intensity of their migraine attacks.¹

Historically, headache has been observed as a complication of many viral epidemics, including Spanish influenza in 1918 and the Russian or Asiatic flu in 1890.^{2,3} This has also been seen more recently in 2009 during the H1N1 pandemic, in which the most frequent neurological sign reported was headache.⁴ In the current coronavirus disease 2019 (COVID-19) pandemic, headache has been found to be one of the most common neurological symptoms of SARS-CoV-2 infection and has even been included as one of the presenting cardinal symptoms.^{5,6,7} **Objective:** To study the prevalence and characteristics of post covid headache

Material and methods

Study setting: Department of General Medicine, VIMS Ballari
Study population: Confirmed post covid cases (health professionals) that visited to medicine OPD.

Study period: December 2022 to January 2023

Study design: Descriptive observational study

Sample size: A total 100 confirmed post covid cases were selected by random sampling method visiting to our OPD.

Inclusion criteria:

- All post covid confirmed cases willing to participate in study were included. Also, those having history of migraine included.

Exclusion criteria:

- Intracranial causes of headache like-
 - Cases of intracranial space occupying lesion
 - Neuro-infections like meningitis, encephalitis

Methods of data collection: After the informed consent, patients' details were recorded in a prescribed proforma. All the details of headache were recorded. Data entered in MS excel sheet and analysed by using SPSS 24.0 version IBM USA. Qualitative data was expressed in terms of proportions. Quantitative data was expressed in terms of Mean and Standard deviation.

Results

Table 1: Distribution according to age and gender

		Number	Percent
Age group in years	20-30	95	95.0
	31-40	5	5.0
		Number	Percent
Gender	Male	57	57.0
	Female	43	43.0

We included total 100 cases in our study. 95% of the patients were from 20-30 years age group and remaining 5% were from 31-40 years age group. Mean age of the study population was 35.1±6.5 years. 57% were males and 43% were females.

Table 2: Prevalence and type of headache

		Number	Percent
Headache	Present	75	75.0
	Absent	25	25.0
		Number	Percent

Type of headache	Primary	25	33.3
	Secondary	50	66.7

Headache was present in 75 cases out of 100, accounting for the prevalence of post covid headache as 75%. Out of 75 cases of headache, majority had secondary type of headache i.e. 50 (66.7%). Remaining 25 i.e. 33.3% had primary type of headache.

Figure 1: Laterality of headache



Majority of the cases had unilateral headache i.e. 49.3% followed by 37.3% with total headache, 8% had right sided and 5.3% had left sided headache in our study.

Table 3: Headache and daily activity

		Number	Percent
Daily activity	Can perform daily activities	41	54.7
	Disturbs daily activities to some extent	32	42.7
	Cannot perform daily activities	2	2.7

Headache and activities of daily living revealed that 54.7% patients can perform daily activities, in 42.7% cases daily activities are disturbed to some extent and 2.7% patients cannot perform the daily activities.

Table 4: Characteristics of headache

		Number	Percent
Characteristics of headache	Throbbing and pulsating	35	46.7
	Pounding like sensation	3	4.0
	Exploding	1	1.3
	Tightness/band like sensation	33	44.0
	Severe hitting type	2	2.7
	Pricking type	0	0.0
	Others/cannot describe	1	1.3

Characteristics of headache revealed that majority had throbbing and pulsating type of headache i.e. 46.7% followed by 44% had tightness/band like sensation, 4% had pounding like sensation, 2.7% had severe hitting type of headache and 1.3% can't describe the same.

Discussion

Al-Hashel et al. reported 59.6% increase in migraine frequency and 64.1% increase in migraine severity during COVID era as compared to pre-pandemic period though only 4% migraine cases had COVID illness. The reasons are independent of COVID illness and multifactorial like poor follow up with neurologist, poor drug compliance, analgesic overuse, cancellation of botox sessions, poor sleep, anxiety and depression.⁸ Even mask-associated 'denovo' headache has been reported in 51.6 percent of healthcare workers.⁹ So attributing COVID-19 as the causative factor to all headache types in COVID illness is probably not justified. Clinicians need to take the headache symptom in a broader perspective and consider other differentials even in the setting of COVID-19 illness.

COVID-19 associated headache has been frequently reported as mild to moderate intensity.¹⁰ Uygun et al. 2020 found mild- and moderate-intensity headache in 74.3% vs severe and very severe headache in 25.7% COVID-19 positive patients.¹¹ Various classical headache phenotypes like migraine or tension-type headache independent of past history of primary headache have been rarely reported except few studies.¹¹

Pathophysiologically, intracranial infections cause headache via direct meningeal infiltration, inflammatory effects of the products of bacteria and by inflammatory mediators. Whereas systemic infections like influenza cause irritation of pericranial or intracranial pain-sensitive structures by direct infiltration, release of endotoxins or the immune response of inflammatory mediators. Some organisms may trigger brainstem nuclei with the end result of neurogenic inflammation and headache.¹²

Conclusion:

Prevalence of post covid headache as 75%. Majority had secondary type of headache i.e. 50 (66.7%). Majority had unilateral headache i.e., 49.3%. Majority had throbbing and pulsating type of headache i.e., 46.7%.

Conflict of interest- Nil

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