



Lifestyle changes during COVID-19 lockdown and migraine

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Background: The COVID-19 lockdown resulted in a deep change in people lifestyle. These changes may influence migraine. Aim of the study was to collect data about migraineurs lifestyle changes during the COVID-19 lockdown period and to relate these items to possible changes of migraine characteristics.

Methods: Patients with migraine who attended the Headache Centre of the University of Trieste from 01.06.2019 to 31.12.2019 were interviewed by neurologists specialized in headache. Patients were not assuming prophylactic therapy or they were on prophylaxis with the same therapy from at least 3 months. Exclusion criteria were spontaneous modifications of the prophylactic therapy, including starting a new therapy, disabling comorbidities, diseases that caused walking impairment, moderate/severe cognitive impairment or psychiatric conditions. Data about demographics, working routine, lifestyle, migraine characteristics and disability (HIT-6) and drugs consumption were compared between the first month of the lockdown (March 2020) and a reference month prior the lockdown (January 2020).

Results: Thirty-seven patients were analysed [migraine without aura (MwoA)= 26P, mean age 45 (31-53)]; migraine with aura (MwA) plus migraine with and without aura (MwA/MwoA)= 11P, mean age 38 (26-47)]. During the lockdown, 12 patients started remote working continuing their usual work, including the use of visual display terminals. No changes were reported for nutritional, sleep or working habits, while more patients with insufficient physical activity (65% vs 31%; p=0.012) were found. Reduced mean headache duration [3 h, (2-12) vs 2 h (1-8); p= 0.041], and HIT score [59 (51-63) vs 50 (44-57); p= 0.001] were found in patients with MwoA, while no changes resulted in patients with MwA plus MwA/MwoA). Severity of the attack and symptomatic drug consumption were the same before and during the lockdown (table 1).

Personal Characteristics	MwoA (n=26)			MwA + MwA/MwoA (n=11)		
	Reference	Quarantine	Sig.	Reference	Quarantine	Sig.
Sleep						
Duration [h]	7 (6-8)	7 (6-8)	0.267	6 (6-8)	7 (6-8)	0.450
Quality [n (%)]			0.453			1.000
Poor	0	0		0	0	
Fair	5 (19)	8 (31)		2 (18)	1 (10)	
Not bad nor good	10 (38)	5 (19)		4 (36)	1 (10)	
Good	10 (39)	11 (42)		4 (36)	5 (45)	
Excellent	1 (4)	2 (8)		1 (10)	4 (35)	
Daily Fluid Intake [mL]	1500 (1000-2000)	1500 (1100-2000)	0.590	1500 (1125-2250)	1500 (1125-1875)	0.892
Coffee [n]	2 (1-3)	1 (1-2)	0.048	3.5 (2-5)	3.5 (2-5)	1.000
Smokers [n (%)]	8 (31)	7 (27)	1.000	4 (36)	4 (36)	1.000
Cigarettes [n/day]	5 (3-10)	5 (3-8)	0.317	8 (4-18)	12 (4-20)	0.317
Alcohol drinkers [n (%)]	15 (58)	12 (46)	0.375	9 (82)	7 (73)	1.000
Wine/beer [U/week]	1 (0-1)	0 (0-1)	0.084	1 (0-1)	1 (0-1)	0.705
Spirits [U/week]	0 (0-0)	0 (0-0)	0.317	0 (0-0)	0 (0-0)	0.317
Work						
Outside the home work [h/day]	8 (5-8)	0 (0-6)	0.001	6 (5-8)	0 (0-0)	0.005
Outside the home VDT [h/day]	1 (0-6)	0 (0-0)	0.011	3 (0-8)	0 (0-0)	0.011
Smart-work [h/day]	0 (0-0)	0 (0-6)	0.011	0 (0-0)	0 (0-8)	0.039
smart-work VDT [h/day]	0 (0-0)	0 (0-6)	0.011	0 (0-0)	0 (0-8)	0.039
VDT [h/day]	0 (0-6)	0 (0-6)	1.000	3 (0-8)	0 (0-8)	0.465
Daily Steps Count [count]	10000 (7000-12000)	2000 (1000-2000)	<0.018	8000 (5250-13750)	2000 (1250-2000)	0.068
IPAQ-SF (MET)	792 (531-1950)	273 (82-816)	<0.001	1356 (495-2142)	426 (66-2209)	0.074
Insufficient MET [n (%)]	8 (31)	17 (65)	0.012	5 (45)	7 (64)	0.625
Headache						
Total headache days [count]	4 (3-8)	3 (1-6)	0.521	2 (1-4)	2 (1-5)	0.757
Severe headache days	2 (1-3)	1 (0-3)	0.376	1 (0-2)	1 (0-2)	0.762
Duration of attack (h)	3 (2-12)	2 (1-8)	0.041	2 (1-2)	2 (1-2)	0.893
Symptomatic drugs	3 (1-4)	2 (1-4)	0.812	2 (0-3)	1 (1-5)	0.676
HIT	59 (51-63)	50 (44-57)	0.001	56 (49-60)	45 (36-49)	0.062

MwoA = migraine without aura; MwA = migraine with aura; VDT = video display terminal; IPAQ-SF = International Physical Activity Questionnaire; MET = metabolic equivalent

Conclusion: During the lockdown, remote working was common. Duration of the attack and disability of migraine were reduced during lockdown, probably as a consequence of the increased time spent at home with less stressors and with the possibility to rest during the crisis.