

Atypical Headache Scenario With A Suspected Case of COVID-19

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Abstract

This an atypical headache scenario in a suspected case of COVID-19. The clinical outcomes, differentials, progression, and reasoning have been discussed and highlighted as possible.

Key Clinical Message:

Headache is not the focus of published papers about COVID-19 and seems to be underestimated in prevalence and characteristics. The classification of headache based upon position, quality, timing, and associations appears to be insufficient and challenging to clinical application in times of crisis.

To the Editor,

I'm a final year MD candidate in Al-Azhar Medical School, Al-Hussein University Hospital, Cairo, Egypt. Recently, I have been exposed without PPEs to a contact person of two positive COVID-19 patients, 5 days later: the contact deteriorated and tested positive. Due to limited resources and high-flow severe cases, health authorities protocol didn't qualify my case for a PCR or a radiological assessment. I self-isolated my self at home and followed up on my signs and symptoms over days. The first day after midnight, I felt dizzy and lightheaded, vital signs were normal and no other symptoms were present. After 6 hours of sleep, I woke up on sever excruciating headache, the temperature reached 38.5 C, but the HR ranged from 70 - 75 BPM, BP was 120/78 mmHg, RR was 10-12 BPM -deep vesicular regular abdomino-thoracic, no other neurological manifestations, no orbital involvement, no congestion, no rhinorrhea, no cough, no expectoration, no dyspnea, no GIT associations, no urine disturbance, no abnormalities in chest auscultation and percussion. Over the next three days, no more symptoms evolved: the headache didn't regress, didn't respond to 1000 mg acetaminophen -even after combined with an NSAID, HR ranged from 80-85 BPM, BP was 110/75 mmHg-but no water-hammer pulse and no systolic nor diastolic murmurs, the temperature reached 39.5 C RR was 10-12 BPM, no other manifestations, and the assessments were repeated at least two times daily. Blood investigations revealed no abnormalities; no anemia of any kind, no platelet dysfunction, no lymphocytopenia, no leukocytopenia, no thrombocytopenia, the parameters of CRP, LDH, D-dimer, and Ferritin were normal. On palpation and percussion: the liver and the spleen were completely on average, the lung was clear; normal TVF, no crepitations no rhonchi, no rub, no extra resonance nor dullness, and no skin nor mucosal discolorations. This further weakened the hypothesis of COVID-19 infection. Still, the headache severity was correlated with the temperature and presented chronologically with the exposure. Meanwhile, I have no personal or family history of any type of migraine and I have not experienced this headache before -even with the most severe infections that I have been through. I have followed the criteria of the ICHD-III: the closest headache in quality was the type 9.2.2.1 of Acute headache attributed to systemic viral infection, I had a diffuse pain, severe in intensity, and related to fever(1). Still, it was not similar to that of common viruses such as influenza, and it had a bad response to acetaminophen. Tension-type, cluster, trauma, substance, migraine, trigeminal, occipital, and ocular headaches were excluded. There was no unilateral orbital/supraorbital or temporal pain, no recent psychological distress, no facial pain, no

conjunctival injection, no lacrimation, no eyelid edema, no forehead/ facial sweating, no ptosis nor miosis, no CO intoxication, no alcohol, no paroxysmal attacks, no sensation of shooting or stabbing or lightning strike, no trauma, no tenderness, no more worsening with day progression, and no association with stress or tension or aggravation by eye movement. Sinusitis, otitis media, acute closed-angle glaucoma, raised intracranial pressure, encephalitis, meningitis, giant cell arteritis, intracranial and subarachnoid hemorrhage were all excluded. There were no mucopurulent nasal discharge, no tenderness over sinuses, no tinnitus, no hearing loss, no prostrating attacks, no painful ear, no vertigo nor nystagmus, no red eyes, no haloes, no corneal clouding, no pupil abnormality, no worsening on waking and no aggravation by cough, sneezing, or bending; no papilloedema, no photophobia, no neck stiffness, no vomiting, no Kernig's sign, no petechial or purpuric rash, no focal neurological signs, no dysphagia, no speech problem, no amnesia, no scalp tenderness, no jaw claudication, no loss of temporal arterial pulsation, no sudden loss of vision, no dysarthria, no faint, and no variable degree of consciousness. In fact, I tried playing chess, solving clinical scenarios, and even performing my usual workout -attempting to compare my mental and physical status. The headache responded positively to hand pressure, articulation, distraction -through reading with recitation and metacognition thinking process, but badly to sleeping and rest. I have had incredible challenges every time I want to sleep and even more after waking up, but noticeably no bad or heavy dreams have been experienced. On the fourth and fifth day: the headache still the same, while I was eating my lunch I suddenly felt an episodic burning sensation in my nose. I started feeling like smelling warm dust, no breathing problem no mouth breathing; just the smell with an annoying sensation of close vomiting. An hour later, I could smell nothing; even the strongest smells started to decay. Whenever I tried to smell more the dusty burning sensation aggravated and the headache worsens.

This is an atypical case of headache in susceptible COVID-19 contact. In a recent meta-analysis of 40,000 patients: Headache seems to be the 5th most common symptom after fever, cough, fatigue, and dyspnea (2). Headache is not the focus of published papers about COVID-19. Nonetheless, headache seems to be underestimated in prevalence and characteristics; for the majority of the literature concerned with the pulmonary and intensive care features of COVID-19, they do not analyze headache -only reporting it in generic descriptions (3). They didn't specify its attribution whether to tension or infection, cough induced, or hypoxic. Neither did they define at which point the headache developed or whether the patients had a previous history of headaches. Meanwhile, the classification of headache based upon position, quality, timing, and associations appears to be insufficient and challenging to clinical application in times of crisis. Extra parameters such as headache response to pressure, posture, potent analgesics, distraction, and articulation should be eligible for discussion in a future tailored algorithm.

List of abbreviations : **HR** ; Heart Rate, **RR** ; Respiratory Rate, **BP** ; Blood Pressure, **BPM** ; Beat/Breath Per Minute.

Declarations

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