Correspondence

Re: Addressing Post-COVID Symptoms: A Guide for Primary Care

To the Editor: In "Addressing Post-COVID Symptoms: A Guide for Primary Care Physicians"¹, the authors present an excellent post-COVID management tool to use as a quick reference and guide for the initial workup and therapeutic support of patients. Indeed, long COVID is a multi-system disease, sometimes occurring after a relatively mild illness. It encompasses distinct clusters of heterogeneous symptoms that can overlap and evolve over time and are sometimes difficult to relate to COVID-19.

Between July 2021 and February 2022, clinical symptoms of 34 cases (mean age 40; 25 women) of long COVID have been met in Family Practice (Belgium) and described in a clinical research report.² The combination of previously unknown irrepressible fatigue, exhaustion on exertion, brain fog, memory impairment with anomia, sometimes anosmia or other multiple symptoms are characteristic of long COVID. The high number of women in this study sug gests a type of autoimmune disease. All but 2 patients have been vaccinated before becoming ill.

The combination of symptoms in those patients suggested a neuronal impairment. A hypo-metabolism of certain brain areas in some long COVID with a strong neurological component had already been demonstrated.³ Brain single-photon emission computed tomography (SPECT) is cheaper and more accessible in primary care. Brain SPECT has been used to show a disorder of cerebral blood perfusion in Alzheimer disease or stroke and therefore may help in detecting cerebral problem in long COVID.

The fourteen patients for whom a brain SPECT was requested had signs of brain impairment including 3 or more of the following symptoms; unexpected tiredness, effort exhaustion, cognitive problems, brain fog, memory loss, anomia, headache, dysphasia, anosmia, dysgeusia, dysesthesia. Their DUSOI/WONCA severity index was high or maximum and their WONCA COOP charts score was over 20, meaning severe functional loss. Unexpectedly, brain SPECT showed severe alterations in cerebral blood flow in all patients, both cortical and central.

All the lesions observed by brain SPECT are similar to those shown in Figure 1. This supports the hypothesis of a vascular perfusion disorder and localized brain ischemia secondary to a coagulation disorder and/or the presence of auto-antibodies⁴ and could guide a therapeutic approach. It should be noted that fatigue and exhaustion

Ethics statement: The patient has expressly agreed in writing to the use of her personal data in an anonymous manner. The ethics committee of the University Hospital of Liege, Belgium, gave its full approval to this study (No. 2022/23).

during exercise can result from a difficult extraction of oxygen from the lungs, probably due also to vascular flow problem.⁵

In the next step, the patients will benefit of the long COVID program of the COVID Human Genetic Effort (https://www.covidhge.com/), an international consortium aiming to discover the human genetic and immunologic bases of the various clinical forms of SARS-CoV-2 infection and in particular the characteristics of long COVID patient. This will remove the doubt for patients without PCR or with negative PCR for whom the immunologic uncertainty (14/34 cases in this series) can have psychological, medico-legal and clinical consequences.

Vascular encephalopathy has been demonstrated in each patient and supports the hypothesis of a persistent coagulation disorder in long COVID. It is necessary to test the reproducibility of this description, conducted on a small number of patient. Nevertheless family doctors have considerable collective resources in epidemiologic research and must act now.⁶

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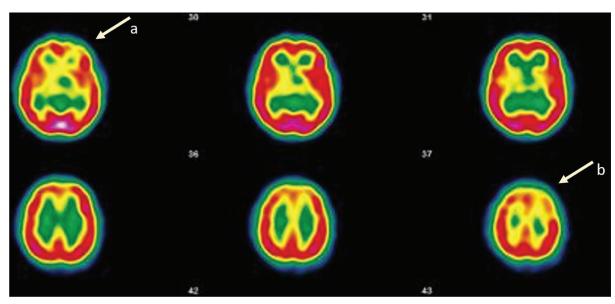
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References

- Vance H, Maslach A, Stoneman E. Addressing post-COVID symptoms: A guide for primary care physicians. J Am Board Fam Med 34:1229–42.2021.
- Jamoulle M, Kazeneza-Mugashi G, Ayoub Z. Descriptive and narrative study of long covid cases in general practice and diagnostic value of single photon emission computed tomography, clinical research report [Internet] University of Liège; 2022 (accessed June 21, 2022). Available from: https://orbi.uliege.be/handle/2268/265.
- Guedj E, Million M, Dudouet P, et al. 18 f-fdg brain pet hypometabolism in post-sars-cov-2 infection: substrate for persistent/delayed disorders? Eur J Nucl Med Mol Imaging 48:592–5.2021.
- Grobbelaar LM, Venter C, Vlok M, et al. Sars-cov-2 spike protein s1 induces fibrin (ogen) resistant to fibrinolysis: Implications for microclot formation in covid-19. Bioscience reports 41:2021.
- Singh I, Joseph P, Heerdt PM, et al. Persistent exertional intolerance after covid-19: insights from invasive cardiopulmonary exercise testing. Chest 161:54–63.2022.
- Alwan NA, Burgess RA, Ashworth S, et al. Scientific consensus on the covid-19 pandemic: we need to act now. The Lancet 396:e71–72.2020.

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Figure 1. Patient MB, F, 48. long COVID since 9 months with brain fog, abnormal dreams, delusion, depressive feeling, irrepressible fatigue, effort exhaustion. The brain SPECT shows an hypofixation of the tracer in left cortico-frontal (a) and left fronto-parietal (b) areas. (Courtesy Drs Bouazza & Mahy, Vesale hospital, ISPPC, Belgium)



Re: Diversity of Department Chairs in Family Medicine at US Medical Schools

In response to Xierali et al: Family Medicine department chair diversity

To the Editor: We applaud the work of Xierali et al in the recent article demonstrating Family Medicine department chairs were more diverse than any other clinical specialty and not only that, were comparable with the United States population. These findings are quite encouraging particularly for Family Medicine leadership. We should be encouraged, but we also need to acknowledge other confirmations that come from this important work.

As we continue to promote equity for faculty who are underrepresented in medicine, addressing historic injustice and systemic racism have defined themselves as part of our work.² Bias and racism are what led to the thinking that underrepresented minority physicians, particular Black physicians, should be sanitation doctors to keep diseases or conditions from crossing racial lines and impacting White people.^{3,4} Not only did this bias promote the closing of several historically Black medical schools, but it also promoted underrepresented minority physicians as clinicians who only provide patient care. That is 1 reason underrepresented minority physicians are in lower ranks in academic medicine than our White counterparts.⁵ Historically, the institution of medicine never intended for underrepresented minority physicians to be physician scientists or scholars. Even though we are excited to say we've changed that narrative, there is still much work to be done. Given the historic design of the system, it is no surprise that there is more diversity in Family Medicine department

chairs than other specialties. Let us not let Family Medicine be a clinician only profession for any faculty, especially underrepresented minority faculty for the benefit of our communities. Let us promote scholarship, leadership and research in our departments of Family Medicine.⁶

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References

- Xierali IM, Nivet MA, Rayburn WF. Diversity of department chairs in family medicine at US medical schools. J Am Board Fam Med 2022;35:152-7.
- Acosta DA, Skorton DJ. Making "good trouble": time for organized medicine to call for racial justice in medical education and health care. Am J Med 2021;134:1203–9.
- Sullivan LW, Suez Mittman I. The state of diversity in the health professions a century after Flexner. Acad Med 2010;85:246–53.
- Campbell KM, Corral I, Infante Linares JL, Tumin D. Projected Estimates of African American medical graduates of closed historically black medical schools. JAMA Netw Open 2020;3:e2015220.
- Fassiotto M, Flores B, Victor R, et al. Rank Equity Index: Measuring Parity in the Advancement of Underrepresented Populations in Academic Medicine. Acad Med 2020; 95:1844–52.

 Coe C, Piggott C, Davis A, et al. Leadership pathways in academic family medicine: focus on underrepresented minorities and women. Fam Med 2020; 52:104–11.

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References

home BP knowledge and practices in addition to ABPM. Future studies should test the effectiveness of programs similar to that described by the author of the letter in larger and real world clinical settings, and determine whether increased knowledge leads to improved BP practices that are durable over time.

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References

- Dalfo-Pibernat A, Dalfo Baque A, Pelegrina Rodriguez FJ, et al. Improving ambulatory blood pressure monitoring knowledge in nurses and doctors: impact of a training intervention. Eur J Cardiovasc Nurs 2018;17:742–50. Dec.
- Green BB, Anderson ML, Ehrlich K, et al. Blood pressure checks for diagnosing hypertension: health professionals' knowledge, beliefs, and practices. J Am Board Fam Med. 2022;35:310–9.
- Green BB, Anderson ML, Cook AJ, et al. Clinic, home, and kiosk blood pressure measurements for diagnosing hypertension: a randomized diagnostic study. J Gen Intern Med 2022; Mar 3.
- 4. Todkar S, Padwal R, Cloutier L. Knowledge, perception and practice of Quebec nurses for ambulatory and clinic blood pressure measurement methods: are we there yet? J Hypertens 2021;39:2455–62.

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