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LETTER TO THE EDITOR

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A global need for more awareness of dysautonomia in postviral syndromes

There are more than 60 million individuals worldwide affected by post-COVID syndrome (long COVID) and struggling to function normally in their daily activities and return to work.[1] Postviral syndromes are linked to long-term sequelae including myalgic encephalitis/chronic fatigue syndrome (ME/CFS), fibromyalgia, chronic pain, and other persistent physical symptoms (PPS) which often includes fatigue as a predominant and disabling aspect.[2,3] A common underlying impairment in many of these patients is autonomic dysfunction (dysautonomia) which presents with an array of symptoms including fatigue, postexertional malaise (PEM), orthostatic intolerance (including postural orthostatic tachycardia syndrome [POTS]), palpitations, dizziness, exercise intolerance, pain, brain fog, gastrointestinal symptoms, and temperature dysregulation.[4] A recent study from a UK specialist long COVID service suggests a prevalence of 38% of patients reporting dysautonomia symptoms on the NASA Lean Test.[5] In our experience, recognizing the symptoms of dysautonomia is a powerful tool that can lead to clinicians having a better understanding of the physiological processes that generate the symptoms experienced. Offering explanations for the wide spectrum of fluctuating symptoms that can occur provides validity and understanding that has often been lacking in this area of medicine. Positively identifying dysautonomia symptoms also has the potential to reduce the number of unnecessary investigations performed looking for organ-specific causes.

The autonomic nervous system (ANS) operates rapidly and in most circumstances without any conscious control. It innervates all organs including heart, blood vessels, lungs, digestive tract, bladder, and various glands and immune system structures. It regulates organ function mediating involuntary internal homeostasis, including control of blood pressure (BP), heart rate (HR), respiration, digestion, fluid balance, thermoregulation, and inflammatory responses. The ANS works along with hormonal and immunological systems to respond to external and internal stimuli and ensure internal equilibrium is maintained to enable stable functioning of the body.[6] The ANS has a central and peripheral component comprising the sympathetic and parasympathetic nervous systems. Dysautonomia results from either damage to these nerves, from an imbalance in the neurotransmitters or in many cases are idiopathic or poorly understood. It is recognized that viral illnesses can be a trigger for the onset of dysautonomia symptoms and this can lead to the development of long-term debilitating health problems such as long COVID and ME/CFS.[7,8]

Identifying dysautonomia is primarily based on detailed history taking which can be done in any healthcare setting, looking for evidence of orthostatic intolerance, palpitations, temperature dysregulation, sweating problems, gastrointestinal symptoms, or sexual dysfunction. There are simple bedside/clinic tests that can be performed to look for evidence of pulse and BP changes in response to physiological demands such as standing and eating.[4] More advanced autonomic testing is based on cardiovascular reflexes triggered by performing specific provocative maneuvers in a controlled environment such as a tilt table test, which captures HR and BP fluctuations in response to the Valsalva maneuver, isometric exercise, cutaneous cold or heat, or cognitive tests.[9] Other special tests include measuring HR variability (HRV), plasma noradrenaline and adrenaline levels, sudomotor testing, and microneurography. The use of condition-specific outcome measures such as composite autonomic symptom score enables symptom assessment and impact on individuals' daily activities.[10]

Once dysautonomia is diagnosed, the management needs to involve a multidisciplinary team that is medically led with other professionals trained in autonomic medicine (including nurse, physiotherapist, occupational therapist, psychologist, and dietician). There needs to be a strong emphasis on shared decision-making and a personalized management plan in setting goals for interventions (such as avoiding energy crashes by pacing and controlling palpitations and hypotension with medications). Digital technology and devices capturing physiological variables (such as smartwatches and chest strap devices) can play a role in some patients for monitoring and managing their condition. The clinics benefit from having strong links to research and it is critical that systems develop specific guidelines for the management of autonomic dysfunction. There are ongoing dysautonomia assessment studies in long COVID[11] and intervention studies[12] which will be reporting on findings in due course.

Autonomic medicine is currently missing from postviral syndrome services in most parts of the world. We need to work toward better recognition of dysautonomia and the development of multidisciplinary clinics that can provide a holistic approach and conduct research to further our knowledge and understanding. The long-ignored enigma of these frequent postviral syndromes and other chronic conditions, often labeled as medically unexplained, needs a fresh approach to management through the lens of autonomic medicine.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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