AUTONOMIC NERVOUS SYSTEM DYSREGULATION

This provides suggestions as you engage in shared health care decision-making with Veterans. It is not intended to replace clinical judgement.

Autonomic nervous system dysregulation may be present even after mild cases of COVID-19. Up to 48% of patients reported dizziness or light headedness greater than 4 weeks post-COVID-19.[7] (NICE, 2021) Of 180 post-COVID-19 patients, 7.2% experienced dizziness and 61% of patients had autonomic dysfunction.[8] (Stella A, 2022)

Things to Keep in Mind

- Signs and symptoms may manifest as palpitations, lightheadedness, dizziness, fatigue, blurry vision, falling, presyncope and decreased exercise tolerance
- Consider systemic conditions such as deconditioning, dehydration, anemia, hypoxia, anxiety, Parkinson's Disease, persistent fever, lung disease, and cardiac disease, including sinus node dysfunction, myocarditis, and heart failure
- Consider orthostatic hypotension versus orthostatic tachycardia
- Review medications such as diuretics, antidepressants, certain beta blockers
- Assess pregnancy/lactation status, review teratogenic medications

Evaluation

Labs to Consider

- Comprehensive Metabolic Panel (CMP)
- Glucose (hypoglycemia)
- Complete Blood Count (CBC) (anemia)

Tests to Consider

- Electrocardiogram (EKG) (arrythmia)
- Evaluate for orthostatic blood pressure (lying, standing) for up to 10 minutes:
  - Have patient lie down for 5 minutes and then measure blood pressure (BP) and heart rate (HR). Have patient stand up and measure BP and HR after every 2 minutes for 10 minutes
  - If there is a drop of systolic blood pressure (SBP) by 20 points or diastolic blood pressure (DBP) by 10 points, then it is considered positive for orthostatic hypotension
  - If the HR increases by >30 BPM without hypotension, then it is positive for orthostatic tachycardia

PACT Management to Consider

- ICD-10 Code: U09.9, Post-COVID-19 condition, unspecified
- Post-Acute Sequelae of COVID-19 and Cardiovascular Autonomic Dysfunction: What Do We Know?
- Consider using Composite Autonomic Symptom Score (COMPASS 31)[9] (Sletten DM, 2012) for evaluating symptom trends (Appendix D)
- Hydration immediately; for postural orthostatic tachycardia syndrome (POTS) consider 64 ounces of water intake daily
- Avoid or limit alcohol intake as it can worsen or precipitate orthostatic hypotension
- Use of salt with caution especially if there is history of left ventricular dysfunction (LVD); POTS recommendation is 3000-5000 mg per day
- Avoid strenuous activity in hot weather
- Start with recumbent or semi-recumbent exercise (rowing, swimming, cycling) with gradual transition to upright exercise (walking, jogging, elliptical) as orthostatic intolerance improves
- Titrated return to activity program (Appendix B)
- Lifestyle modification including slowly getting out of bed before standing and use of compression stockings
- Frequent, small, balanced meals with whole foods, protein, vegetables, and fruits, and high fiber for POTS
- Biofeedback

Consults to Consider

- Cardiology:
  - If assessment is negative but high clinical suspicion for POTS
- Physical Therapy:
  - Titrated return to individualized activity program (Appendix B) and energy conservation techniques
- Occupational Therapy:
  - Energy conservation techniques
  - Activities of daily living (ADLs)
- Whole Health System approach:
  - Biofeedback, yoga, health coaching
- Nutrition

[7] National Institute for Health and Care Excellence (NICE) UK, https://www.nice.org.uk/guidance/ng188
[8] Stella A. Autonomic dysfunction in post-COVID patients with and without neurological symptoms: a prospective multidomain observational study. Journal of Neurology. 2022 Feb;269(2):587-596. doi: 10.1007/s00415-021-10735-y
[9] Sletten DM. COMPASS 31: a refined and abbreviated Composite Autonomic Symptom Score. Mayo Clin Proc. 2012 Dec;87(12):1196-201. doi: 10.1016/j.mayocp.2012.10.013. PMID: 23218087; PMCID: PMC3541923