Maria Vera Nunez, M.D., M.S.

A whole-person health approach to Myalgic Encephalomyelitis/Chronic Fatigue Syndrome – Lessons for Post-COVID conditions

Sunday Conversations with MassME

June 19, 2022
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Featured Speaker

Dr. Maria Vera-Nunez, MD, MS

Board-certified Internal Medicine and Integrative Medicine physician, Certified Functional Medicine Practitioner, MS in Medical Informatics

Assistant Professor at NSU’s Neuro-Immune Institute for 7 years

Currently: Attending physician at the Whole Psychiatry and Brain Recovery Center in Maryland; Research Assistant Professor at the Medical University of South Carolina

Founding member US ME/CFS Clinician Coalition

Also participating:

Kenneth Friedman, PhD, Host

Kailey, a person with ME
Your Host – Kenneth J. Friedman, Ph.D.

- Father of a child with ME/CFS
- Former Medical School Professor (Physiology (NJMS - UMDNJ)
- Currently Adjunct, Associate Professor of Medicine (SOM Rowan University)
- Academic interest in ME/CFS since my daughter become ill - the mid-1990’s
  - Co-Author of three, ME/CFS diagnosis and treatment manuals
  - (Former) Member of the CFSAC 2004-2007 (Research, Education Subcommittees)
  - Organizer and Participant of the NIH CFS State of Knowledge Workshop 2022
  - Guest edited 3 themed, ME/CFS, medical journal issues: *Frontiers in Pediatrics/Neurology; Medicina; Healthcare*

- Current Interests:
  - Reclassifying chronic illnesses precipitated by infection – PAPIS (Post Active Phase of Infection Syndromes (Examples include ME/CFS, PASC, and chronic Lyme)
  - Developing a PAPIS Topical Collection in the journal *Healthcare*
Whole-person health

- Look at the person as a Whole
  - Clinical symptoms
  - Behavior
  - Social/environment

- Switching focus from disease to
  - Restore and promote health
  - Prevent disease

Image source: NIH website – National Institute for Complementary and Integrative Health
Whole health

- What is important for the patient?
- Goals of care

Source: US Department of Veterans Affairs – Whole health https://www.va.gov/wholehealth/
Why apply a whole person approach to ME/CFS care?
Integrative Medicine

• Patient-centric focus:
  • Health needs
  • Preferences

Healthcare team for ME/CFS

- Create a partnership
- Empower the patient/caregivers
- Team effort!
  - Clinical provider
  - Nutritionist
  - PT/OT
  - Psychologist
  - Acupuncturist/Massage therapist
  - Health coach
Functional Medicine

- Finding the underlying mechanism
  - Antecedents
  - Triggers
  - Mediators
- Personalized healthcare plan

ME/CFS lessons that may apply to Post COVID Conditions
Foundation - Lifestyle

1. Nutrition
2. Stress management
3. Sleep
4. Activity/exercise
5. Relationships - connection
Patients with ME/CFS are at risk of nutrient deficiencies:

- Long-term use of medications
- Gastrointestinal problems (reduction of beneficial bacteria or increase of potentially pathogenic bacteria, SIBO)*
- Dysautonomia (motility issues, nausea, reflux, gastroparesis, abnormal digestive enzyme release)

Nutrition

Patients with ME/CFS are at risk of nutrient deficiencies: cont

- Dental/oral problems*
- Eating disorders**
- Tube feeding *

* Rowe, P.C., et al., 2017, ME/CFS Diagnosis and Management in Young People: A Primer. Front Pediatr, 5: p. 121
Nutrition

• Multiple nutrient deficits described in patients with ME/CFS

• Discuss with your clinical providers about checking your nutrient levels and adding or adjusting the replacement dose based on the results.
Effects of chronic stress

Brain & Nervous System:
- Activates “fight or flight” response
- Damages areas of brain responsible for memory and learning
- ↑ Risk of Alzheimer’s and dementia

Heart & Blood Vessels:
- ↑ Heart rate, blood pressure
- ↑ Risk of persistent high BP, heart disease and stroke

Respiratory System:
- Cause shortness of breath and worsen asthma or COPD
- Can cause shallow breathing which over time may ↓ oxygen to vital organs

Adrenal Glands:
- Release cortisol (a stress hormone)
- Long-term elevations of cortisol can ↑ risk of other health conditions

Musculoskeletal:
- Causes muscle tension
- ↑ Tension in neck
- ↑ Headaches/migraines

Reproduction:
- ↓ Libido and fertility
- Can cause menstrual irregularities
- ↑ Severity of PMS

Digestion:
- Less blood flow to digestive organs due to “fight or flight” response
- Can trigger digestive pain, gas, bloating, nausea and loss of appetite
- Can trigger IBS/IBD flares
Stress management

- Diaphragmatic (belly) breathing
- Tai Chi, Yoga
- Mindfulness
- Cognitive Behavioral Therapy
- Guided imagery
- Biofeedback
- Gratitude
Sleep

- Sleep deprivation decreases **glymphatic system** clearance of waste in the brain.

Image source: Mogensen 2021. Int J. Mol. Sci. 22(14), 7491
Sleep

- As much as possible: same sleep and wake-up time
- Avoid stimulant or anxiety-inducing activities close to bedtime
- Avoid LCD screens (laptop, TV, smartphone) or use blue-light blockers (apps, glasses)
- Dark bedroom with a comfortable temperature
- Belly breathing
- If you snore discuss with your clinician home oximetry or sleep study to evaluate for sleep apnea.
Activity/exercise

- Energy conservation
- Keep track of your activities and symptoms
- Activity trackers (steps, heart rate, heart rate variability)
- Decluttering/minimalism
Relationships - Connection

Close relationships

- Decreased risk of heart disease and stroke
- Lower risk of depression and dementia

- Pets
- Nature
  - Dr. Suzanne Simard’s book – Finding the Mother Tree
Mast cell activation in ME/CFS

- Increase in mast cells in moderate and severe ME/CFS reported.*
- MCAS may present with symptoms in multiple body systems.

Mast cell activation Post COVID

- Hyperinflammation “cytokine storm” response may be rooted in an abnormal Mast cell response.*
- Observation: Medications with activity on mast cells and mediators have been helpful in Post COVID-19 illness. *

* Afrin, L. 2020. COVID-19 hyperinflammation and post COVID 19 illness may be rooted in MCAS. International Journal of Infectious Diseases 100: 327-332
Mast cell activation Evaluation

- Try to identify triggers.
- Avoid rich histamine foods.
- Discuss with your clinician to complete tests for MCAS
Autonomic Dysfunction
Autonomic dysfunction in ME/CFS

- Small fiber neuropathy*
- Abnormal cardiac filling during exercise **
- Reduced cerebral blood flow ***


van Campen, C., et al., 2020, Cerebral blood flow is reduced in ME/CFS during head-up tilt testing even in the absence of hypotension or tachycardia: A quantitative, controlled study using Doppler echography. Clin Neurophysiol Pract, 5: p. 50-58
Autonomic dysfunction Post COVID

- Persistent intolerance to exercise and
- Abnormal cardiopulmonary exercise testing*

- Tilt table test reproduced Long COVID symptoms
- Decreased cerebral flow
- Small fiber neuropathy**

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Autonomic dysfunction evaluation

- Passive standing test*
- Cardiology evaluation
- Tilt-table test
- Neurology evaluation
- Skin biopsy for small fiber neuropathy**

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Please join us for a special program
Sunday, August 21, 2022, 4 p.m. EDT

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