ECHO Idaho: Alzheimer's Disease and Related Dementias
CASE RECOMMENDATION FORM

ECHO Session Date: 8/27/2024 **Presenter Credential**: MD

Thank you for presenting your patient at ECHO Idaho –Alzheimer's Disease and Related Dementias session.

Summary:
A 74-year-old man with a history of hypertension, high cholesterol, high lipid levels, obstructive sleep apnea (unable to tolerate CPAP), chronic insomnia, Barrett's esophagitis, benign prostatic hyperplasia with lower urinary tract symptoms, status post renal cell carcinoma with ablation, hypothyroidism, long history of ADHD, and anxiety presents with delusional thoughts, disinhibition, a resting tremor in his right upper extremity, and worsening cognitive function since 2020. His MOCA in 2023 was 20/30. He still shops, cooks and participates in activities with his family. Socially, he continues to live with his spouse, who became his guardian a couple of years ago due to his unusual and delusional behavior. He is seeking diagnostic clarification.

Question:
Please help with diagnostic clarification.

After review of the case presentation and discussion of this patient's case among the ECHO Community of Practice, the following suggestions have been made:

RECOMMENDATIONS:

At this point in time, the patient and his spouse can be told that given the 'available' data, he meets criteria for "MCI" with multiple contributing factors.

Currently treatment is limited:

- Patient does not yet meet DSM-5 criteria for major neurocognitive disorder.
- While imaging suggests potential neurodegenerative process, no clinical symptoms have been observed yet.
- The patient does not qualify for anti-amyloid treatments due to the mixed picture and unclear diagnosis.

Focus on treating reversible contributing factors, optimize brain-healthy lifestyle, and monitor for any cognitive decline

- Recommend a mental health provider for both counseling and med management
- Address some lifestyle changes (OT); see more below
- Possible repeat neurocognitive testing in 12-18 months

Given the unknowns, the focus should be on treatable factors and optimizing quality of life.
  - Let the patient know that he is heard and that you understand he is anxious and worried the diagnosis.
  - Ensure him that you will continued monitoring as necessary with reassessment occurring if function changes, to better identify the contributing factors to cognitive decline.

Differentials to consider:

- While imaging suggests potential neurodegenerative process, insufficient clinical symptoms have been observed to qualify for a major neurocognitive disorder diagnosis.
- Multiple risk factors for vascular dementia
- Suggest reviewing original MRI images for overlooked details, particularly for signs of cerebrovascular small vessel disease (CSVD)
- Lack of strong frontotemporal dementia evidence based on behavioral signs, with possible disinhibition attributed to late-life ADHD or <u>potential</u> emerging mixed-type dementia.

Occupational Therapy

- Despite any cognitive decline, the patient is still fully functioning in basic daily activities, although he may struggle to initiate hobbies or activities
- In the home setting:
  - Recommend OT in the home environment where the patient performs daily activities with a focus on maintaining the patient's ability to function
  - OT involves assessing what the patient can do independently and where they might need assistance, while also considering the patient's past interests and hobbies.
  - In the home setting, the therapist can identify safety risks and educate both the patient and his wife on how to manage these risks, particularly in the context of mild cognitive impairment. This includes using external cues for tasks like turning off the oven and guiding the wife on effective communication to reduce agitation.
  - OT in the home can also help collaborate with prescribing providers on how medications are working and also work with the individual and their spouse on ability to take their meds correctly.
- Involve the spouse
  - His wife can help support the patient by using strategies like verbal cues and physical assistance to keep him engaged in activities he enjoys.
- Rest and sleep is also an "occupation" that OT addresses
  - OT can work to build sleep hygiene habits/routines, look at the environment to help make it conducive to sleep.

While this patient has agreed does not have funds to pay for blood biomarkers, the below information provides more information about biomarkers.

- AD is now diagnosed by biomarkers and the "experts" feel this is definitive for all practical purposes. For more, review: Recent advances in diagnosis and treatment of early Alzheimer's Disease (Abhilash Desai, 8/26/24)
- If the patient agrees to biomarker testing and has positive Alzheimer's biomarker that is FDA approved (CSF biomarkers, Amyloid PET), then his diagnosis would be MCI due to Alzheimer's disease besides other causes of MCI.
- Even if AD biomarker testing is positive there could still be a mixed etiology at play with differential co-morbid conditions of potential vascular disease (if review of neuroimaging supports) and FTD given the FDG-PET findings.
- The changes of false positive are very low. Meaning if biomarkers are present, they do have Alzheimer's in the brain.
- When Core 2 biomarkers are present, it is very likely that Alzheimer's is contributing to cognitive impairment and functional decline.
- If Core 2 are negative, then Alzheimer's disease is unlikely to be contributing and best to look at other causes of cognitive impairment and functional decline (e.g., depression, OSA, cerebrovascular disease).

Pharmacology thoughts:

- One thing that stands out and should be questioned, is the use of maximum dose quetiapine. Very few people are on the maximum dose of an antipsychotic, at any age. As this patient is 74 years old, he may be more susceptible to adverse effects compared to a younger individual. While the dose may be appropriate, it should be questioned.

Resources:

Safety Evaluation in Dementia: Addressing Finances, Driving, Aging in Place, Firearms, and More (Slides)
Aid To Capacity Evaluation
Alzheimer's Disease Neuroimaging Initiative (Data Source)
Hippocampus in health and disease: An overview
Possible mechanisms for atrophy of the human hippocampus
A Brief Review of Quetiapine
Training Videos: Reading PET Scans
Recent advances in diagnosis and treatment of early Alzheimer's Disease (Abhilash Desai, 8/26/24)