# Typical Cases in Primary Care of Patients Living With Dementia

**Advisory Council on Alzheimer's Research, Care and Services**

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**Disclosures**
- Eli Lily
- Eisai
- Genetech

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## Case Study #1—Mrs. AW

- In 2009, this 82-year-old African American widow from Connecticut presented for concerns about her memory. She was having difficulty remembering things but had no problems managing her household affairs or driving.
- Since her husband's death in 2001, she had gradually lost 30 pounds. She attributed her weight loss to less entertaining and loss of appetite since his death. She had been taking medication for her diabetes and hypertension and expressed no problems .
- While visiting her daughter, in Georgia she was found unresponsive by her sister. When EMTs were called, she was found to have a glucose of 30 mg/dL. The EMTs administered glucose and fluids until she was back at her baseline.
- She elected not to go the hospital. She preferred to see her PCP. An Appointment was made for the next available date.

ADL = activities of daily living; EMT = emergency medical technician; PCP = primary care provider; MRA = magnetic resonance angiography.

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## Case Study #1—Mrs. AW – Past Medical History

**Diagnoses**

- Hypertension
- Type 2 diabetes mellitus
- Hypercholesterolemia
- Obesity (resolved)

**Medications**

- Metformin 500 mg BID
- Amlodipine 5 mg daily
- Aspirin 81 mg daily
- Glipizide 10 mg daily

**Past surgery**: none
**Social history**: non smoker, non drinker
**Preventive health**: immunizations current
**Mammogram:** normal
**Colonoscopy in 2007**: diverticulosis, otherwise normal
**Family history**: hypertension, diabetes, mother and sister died after recurrent CVAs and onset of dementia

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## Case Study #1—Mrs. AW – Test Results of Studies ordered by PCP

**MRI/MRA:**

- No abnormal enhancement
- Moderate subcortical deep and periventricular white matter intensities
- Moderate volume loss; no diffusion abnormality, mass/mass effect, or extra axial fluid collection; no acute or early subacute infarction

**Carotid Ultrasound**

- Findings are suggestive of hemodynamically significant stenosis of left cavernous internal carotid artery. Further studies will be conducted as clinically warranted.

**Labs**

- CBC and $B_{12}$ were both normal; CMP was normal except for a high glucose (132 mg/dL); thyroid was normal; HgA1c = 9.0%; UA was normal.

CBC = complete blood count; CMP = comprehensive metabolic panel; HgA1c = glycosylated hemoglobin; UA = urinalysis.

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## Case Study #1—Mrs. AW - Neuropsychological Exam Results

- MMSE = 23/30 incorrect for date, floor of building, and county; difficulty spelling WORD backwards; recalled 1/3 words and did not improve with cues; and incorrectly repeated a phrase
- GDS 2/15: no depression
- Spontaneous language is fluent; reading level is average.
- Mild impairments in: language, executive function, learning, and memory. Her daily functional abilities are globally intact.

She is characterized as ***mild cognitive impairment***.

- Etiology is indeterminate, but her vascular risk factors may contribute to cognitive difficulties.

Geriatric Depression Scale - https://integrationacademy.ahrq.gov/sites/default/files/2020-07/Update_Geriatric_Depression_Scale-15.pdf

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## Case Study #1—Mrs. AW - 2011-2013

**AW is brought to Georgia**:

- No Further medical or neurologic evaluation is done
- She has managed her BP and Diabetes without meds
- Home care managed by patient and family with paid caregivers
- No behavioral difficulties
- Independently ambulatory, self feeds, toilets with assistance

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## Case Study #1—Mrs. AW - 2013

- AW has become agitated, confused, and unwilling to eat.
- She has fallen and become lethargic; she is poorly responsive.
- She is taken to the Hospital ED for evaluation.
  - Medical evaluation significant for a UA moderate LE; urine glucose 500 mg/dL
  - BUN/Cr = 12/1.03 mg/dL; Cl = 100 mEq/L; glucose = 132 mg/dL; Wbc = 5.0; Hct = 45.1%; Plt = 239,000; albumin and other indices within normal limits

ED = emergency department; LE = leukocyte esterase; BUN = blood urea nitrogen; CR = creatinine; CL = chloride; Wbc = white blood (cell) count; Hct = hematocrit; Plt = platelet; UTI = urinary tract infection; IV = intravenous.

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## Case Study #1—Mrs. AW - What Is Happening With This Patient...

- Her course…
  - Her syncope was attributed to a UTI and dehydration.
  - She was hospitalized and treated with IV fluids and antibiotics for 3 days.
  - Her agitation and irritability worsened in the hospital, but she was hemodynamically stable.
- Her diagnosis…
  - Delirium with dementia
- Her outcome…
  - She returned home with her family.

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## Case Study #1—Mrs. AW - 2014

- AW begins waking at midnight and wandering about the house. After leaving the house one evening, she was unaware of where she was or why she even left the house.
- Geriatric psychiatry consulted for evaluation.
  - Citalopram 20 mg was prescribed ; Trazodone 50 mg was prescribed for sleep.
  - Adult daycare program for structured activity and social interaction 5 days/week - (she attends 3–4 days/week)
- No further report of wandering or of insomnia with medications and daily activity.
- 2024 - AW dies with her diagnosis of "Dementia"
- Brain and Spinal Cord autopsied - Findings Lewy Body, Alzheimer's and vascular pathologies MIXED
  - Mixed dementia; Genetics not obtained

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## Case #2 Mrs. P

Mrs. P is a 62 year old Corporate executive who retires in 2021 during the pandemic. She is highly capable and plans travel to serve on other corporate boards. Her spouse notices that she repeats herself and frequently forgets to do things. She is able to drive, dress and plan daily activities to include picking up her nieces from school.

**Past Medical History**: Overweight, Hypertension, Hypercholesterolemia

**Medications**: Blood Pressure pills

**Family History**: Dementia in her father and mother who each died in their 80's

**2022:** Mrs. P travels to Florida to participate in the Bio Hermes trial. She get testing, labs and a PET Scan. The testing is "normal" but her PET Scan is positive for Amyloid. She is referred to Emory University ADRC- Definitive neurologic examination takes place with MRI and CSF analysis. She never reports findings to her PCP. Diagnosis: Alzheimer's Disease

**2023**

She enrolled in a cognitive rehabilitation program. She maintains all previous activities with minimal difficulties.

**2024**. Patient remains independent, but spouse is now retired and is assuming more "supervision" of her activities. Her PCP is now aware.

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## Case #3 Mrs. K

**2020-** Mrs. K is married to a corporate executive. She works out daily, plays tennis and manages her ADL's. She has no chronic illnesses.She begins to have difficulty remembering directions and becomes anxious.

Family History: dementia in parents, grandparents and great grandparents

**2021-** PCP completes office screening and laboratories but orders no imaging and meds for anxiety. She goes home. Her spouse eventually hires in home help for 4-8 hours each day. He assumes cooking duties.

**2022-** With progressive inability to manage her affairs, in home help is hired to assist 12 hours/daily. PCP has NOT completed any further examination but refers Mrs. K to the Neurologist at a local hospital system. New medications are prescribed. Brain MRI is ordered. NO CSF. No PET Scan. Her spouse begins to work from home to supervise.

**2023**- With rapid cognitive and physical deterioration, Mrs. K is referred to University ADRC for 2nd opinion and probable research using new drug therapies.

She is not a candidate for any interventional therapies because of her advanced dementia. No Pet Scan. Repeat MRI completed. Social workers assigned to assist family. Spouse is fulltime caregiver.

2024- Mrs. K dies at home

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