Alzheimer’s Disease:
Mary’s Journey Through the Health-care System

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Interdisciplinary Case Conference

This Case revolves around a 72 year old, recently widowed, woman named Mary who is beginning to experience changes in her daily routine. While the potential exists for her to “fall through the cracks” of the health care system, she is fortunate enough to encounter health care professionals who screen and make appropriate referrals.

Directions:
For each of the 5 following sections we will have about 20 minutes. Take about 13 minutes to read and discuss the visit and questions at your table. We will follow with 7 minutes for large group discussion.

A visit to the Dental Hygienist
A daughter in-law (DIL) brings Mary in for her routine dental visit. Mary recently lost her husband and missed her last dental appointment, so the daughter-in-law thought she could help by bringing her in. Mary usually has fantastic oral hygiene (OH). She did lose some teeth as a teenager due to lack of family funds and education and therefore has worn a lower partial since she was in her late twenties. She is now experiencing tender gingiva, bleeding on probing (BOP), and brushing (poor OH) which she never had before. The clinician also notices fetid odor/halitosis and food impaction in between several teeth. The patient is usually very conscientious about her teeth and has mentioned on several occasions over the years that she never goes anywhere without her partial and her husband had never seen her without it. However, today the patient says she has forgotten her lower partial and is unsure of where it is. Also, when asked about the bruise on her left cheek and the small chip on #8 (front tooth), the patient states that she recently had fallen and hit her face.

QUESTIONS:
1. At this point, who should be considered for referral and why?

2. As health care providers, what alternative care suggestions could we make to help improve this patient’s daily oral care?
Following-up with her Physician Assistant

Mary has been a patient (Pt.) with the medical practice for six years with visits every six months for routine hypertension check up and lab work. All lab work has been within normal limits. Routine Medications: Hydrochlorothiazide 25 mg daily, Atenolol 50 mg daily, ASA 325mg daily, Calcium/vitamin D 650 mg BID, Acetaminophen 650 mg as needed (PRN) for headaches. Pt. is seated in exam room with her DIL. Vital Signs: BP 126/72, RR 16, HR (pulse) 68, Temp 98.6 F, BMI 27. Non-Smoker. Pneumovax and Flu immunizations up to date.

Pt. has no complaints or concerns, states she is here because “the dental hygenist told me to come in.” DIL states the family is concerned by the fall and injury and has concerns regarding Pt’s mental health. She is increasingly forgetful, has gotten lost while driving a known route and is now living with DIL, secondary to the death of her husband. Physical examination; WNL, except 3 cm resolving contusion on L mid-mandibular area and small chip noted on face of tooth #8, relatively poor dentition globally and partial plate missing. Complete neurological examination normal with the exception of mild gait instability and MMSE score of 22/30. Ten Point Depression Questionnaire completed with patient; probable depression.

Assessment: L Cheek abrasion s/p fall
Dysthymia vs. Dementia vs. Normal Grieving Reaction
HTN-Stable
Osteopenia- Dexa Scan update needed in six months (last 9/2006)

Plan: Full medication review, DIL to bring in all pill bottles this week.
Consider MRI, no history of previous brain imaging.
PT referral for balance review and fall history analysis
Psychology referral for review of dysthymia, grieving and abnl MMSE
Return to clinic in one month to review medications, counseling options and referral results

QUESTIONS:
1. What questions would you ask the patient to help with differential diagnoses between Dysthymia vs. Dementia vs. Normal Grieving Reaction?
SUPPLEMENTAL INFORMATION for Physician’s Assistant visit:

10 Question Depression Screen:
For the following questions, answer:
None of the time
A little of the time
Some of the time
Most of the time
All of the time
1. In the past 4 weeks, about how often did you feel tired out for no good reason?
2. In the past 4 weeks, about how often did you feel nervous?
3. In the past 4 weeks, about how often did you feel so nervous that nothing could calm you down?
4. In the past 4 weeks, about how often did you feel hopeless?
5. In the past 4 weeks, about how often did you feel restless or fidgety?
6. In the past 4 weeks, about how often did you feel restless you could not sit still?
7. In the past 4 weeks, about how often did you feel depressed?
8. In the past 4 weeks, about how often did you feel that everything was an effort?
9. In the past 4 weeks, about how often did you feel so sad that nothing could cheer you up?
10. In the past 4 weeks, about how often did you feel worthless?

SUPPLEMENTAL INFORMATION for Neuropsychology visit:

*In the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), each axis refers to a different domain of information. “The use of the multiaxial system facilitates comprehensive and systematic evaluation with attention to the various mental disorders and general medical conditions, psychosocial and environmental problems, and level of functioning that might be overlooked if the focus were on assessing a single presenting problem. A multiaxial system provides a convenient format for organizing and communicating clinical information, for capturing the complexity of clinical situations, and for describing the heterogeneity of individuals presenting with the same diagnosis. In addition, the multiaxial system promotes the application of the biopsychosocial model in clinical, educational, and research settings.” (Psychiatry Online 10.1176/appi.books.9780890423349.11659)*  
The five axes are:
Axis 1: Clinical Psychiatric Disorder  
Axis 2: Personality Disorders, Mental Retardation  
Axis 3: General Medical Conditions  
Axis 4: Psychosocial and Environmental Problems  
Axis 5: Quantitative Assessment of Global Functioning (GAF score)
Alzheimer's Disease:  
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Neuropsychological Examination

Neuropsychological evaluation conducted for differential diagnosis. Patient displayed pattern of memory impairment and executive dysfunction (cognitive flexibility, organization and planning, abstract concept formation). Overall processing speed and attention capacity also mildly reduced. Visuospatial functioning and language within normal limits, with the exception that verbal output was somewhat reduced. Score on Geriatric Depression Scale indicated mild depression. However, apathy and cognitive deficits make patient seem more depressed than she is. No depression diagnosis given her recent bereavement. But if mood continues depressed or worsens, patient may meet criteria for depressive disorder.

Diagnoses:  
Axis I  Dementia of the Alzheimer’s Type  
Axis II  No diagnosis  
Axis IV  Recent Bereavement

Recommendations:
1. Trial of acetylcholinesterase inhibitor appropriate to address cognitive deficits (Information sent back to PA who starts Aricept).
2. Patient may benefit from maintaining a relatively consistent daily routine and may break complex tasks into smaller steps. Also recommend preparing for changes in advance. Referral to OT is recommended for help in developing consistent strategies and routines, also in evaluating driving as appropriate.
3. Monitor psychological functioning and provide family/patient education and support.

Questions:
1. In addition to psychotherapy for support and to address depressive symptoms, what resources or community support services would you offer Mary and her family?

2. What might be different in your approach or resource recommendations if Mary was Latina or from a low SES background?
Physical Therapy Examination

Initial examination by the physical therapist reveals
- c/o lethargy and dyssomnia which are new for her.
- Information regarding previous fall occurrence→ Patient reports she was alone in her home in the evening, heard the phone ring, and turned to go answer it. Somehow she ended up on the floor and thinks she bumped her head on a chair when she fell. She was not able to provide more detail. She eventually was able to get up on her own, but it was a struggle. She reports no other incidence of falling, but has had several other LOBs.
- Physical examination revealed:
  o mild weakness in both lower extremities
  o decreased balance as noted by a score of 40/56 on the Berg Balance Scale
  o slow gait speed of .8 m/s (expected speed would be ~ 1.3 m/s)
  o difficulty with dual-tasking: gait speed slowed to .5 m/s when required to answer questions while walking
  o she was negative for orthostatic hypotension with position changes
- Physical therapy assessment: Mary presents with multiple risk factors for future falls including diagnosis of AD, history of a previous fall, three medications with dizziness as a potential side effect, LE weakness, and low score on balance examination. She would benefit from PT services to improve strength, balance, and gait, as these changes go beyond what would be expected for her age and are amenable to improvement.
- Additional Recommendations:
  o Referral for a medication evaluation as potential medication side-effects may interfere with therapy and may be contributing to fall-risk
  o She would also benefit from a home safety assessment (either PT or OT could do this)

Questions:
1. What do you think can be accomplished in a home safety assessment?
2. What level of information would you (your discipline) want from the physical therapist?
Medication evaluation with pharmacist

The pharmacist meets with Mary and DIL. Mary is notably quiet and DIL is doing much of the talking about how her mother-in-law has been recently doing. She reports endless visits with very helpful professionals, but feeling “horribly overwhelmed” with the entire process. DIL asks, “It is normal for her to be having these bruises on the skin?” The pharmacist discusses the impact of the medications on Mary’s health with DIL since she will be in charge of Mary’s entire regimen. The pharmacist will also urge DIL to find a way to obtain help in the face of her obvious stress so she will not succumb to care-taker associated depression.

Pharmacist medication review: Patient continues hydrochlorothiazide (HCTZ), atenolol, daily aspirin and DIL is asking about melatonin as it has reportedly been helping for sleep. Bruising started when DIL added Ginkgo and Garlique supplements to Mary’s current regimen to “help reduce dementia progression.” The antiplatelet function of the Ginkgo and Garlique can contribute the symptoms of which DIL is complaining of.

Pharmacist Plan:
1. Pharmacist calls PA regarding changes in Aspirin to 81mg daily and advises DIL to avoid the Ginkgo and Garlique to reduce the risk of serious bleeding complications, preserve skin integrity and reduce the risk of skin infection.
2. Pharmacist tells DIL that Melatonin supplement may be continued, but Mary must see PA periodically for lab follow-up on CBC and LFT.
3. Pharmacist and DIL discuss compliance, expectations and the need to continue having Mary follow-up with her health care team.

Questions:
1. What is the benefit of adding an acetylcholinesterase inhibitor agent at this point in Mary’s condition?

2. What is the downfall of currently available anti-Alzheimer’s agents in the management of dementia?

FINAL QUESTIONS?
Alzheimer’s Disease:
Mary’s Journey Through the Health-care System

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Occupational Therapy Examination

**Initial examination through interview client and caregiver by the occupational therapist reveals**

- Increased problems sequencing ADLs and IADLs for example cannot prepare a balanced meal, has difficulty turning TV on/off, managing the controls on the microwave
- Inability to remember what her son and daughter-in-law asked her to do
- Got lost while driving and drove around for 2 hours before calling her daughter-in-law on the cell phone to get help, had to be driven home by a police officer
- “Missing things, can’t seem to see things that are right in front of me. I just went to the eye doctor”. “The rice on my dinner plate got cold because I did not see it!” The therapist asked the color of the plate and the daughter-in-law responded it was white.
- May feed the dog twice or forget to feed the dog.
- Reduced interest in hobbies and becomes irritable when son mentions these activities.
- Patient’s conscientiousness about physical appearance and dental health has significantly declined.

**Occupational therapy assessment:**

- Short Blessed Exam 8/24, Trail Making Test Part B (unable to complete).
- Difficulty seeing objects of the same color on the same color background.
- Difficulty making a grill cheese sandwich in the clinic, not sure about the sequence and burned one side of the sandwich. Needed a reminder to check the other side before it burned. Became frustrated.
- Was able to successfully make the sandwich with verbal cues for each step.
- Send follow up workup to Dental Hygienist detailing strategies to ensure patient maintains proper oral health.

**Questions:**

1. **What strategies or tools could the son and daughter-in-law use to help Mary to bring about best performance of dental self-care?**

2. **What do you believe could be modified in the environment to better facilitate performance of ADLs/IADLs and reduce confusion? Think about the goals of your own profession and how they could be facilitated by OT recommendations.**

3. **How would each discipline discuss driving cessation with the client and caregiver?**

**FINAL QUESTIONS?**