

Update: Evaluation and Management of Driving Risk in Dementia

Case Presentation

An 82-year-old man returns to follow up with his neurologist for treatment of Alzheimer's disease (AD). He was last seen 4 months ago in your office. He has a 6-year history of symptoms. He is brought to the clinic today by his son who has noted further decline in his father's function over the past several months. The son reports that the patient is becoming more forgetful at home. He is forgetting where he has put his glasses, and his car keys. The son notes that over the prior weekend he went with his father to the store and was a passenger in the car while his father was driving. He reports that his father went through a stop sign and then on the highway was driving 10 miles under the speed limit. The patient stated that he was driving so slowly because last month he had been given a ticket for reckless driving. During that event he did not signal when he changed three lanes on the highway. He has been on donepezil (Aricept) and memantine (Namenda). He reports that he is still dressing himself, making some sandwiches, and bathing himself. He is staying home most of the day, watching the television. He has no interest in books, as he cannot "follow them" anymore. Review of his last visit reveals that he received a 28/30 on the Mini-Mental State Examination (MMSE). MRI of the brain from 2 years ago reveals general atrophy in the medial temporal lobes that is moderate in severity.

His past medical history is significant for diabetes and a mild associated peripheral neuropathy, hypertension, and hypercholesterolemia. He had cataract surgery on both eyes 2 years ago. He is allergic to penicillin. He does not smoke and drinks two alcoholic beverages a week. He takes donepezil 10 mg at bedtime, memantine 10 mg bid, metformin 500 mg bid, atenolol 25 mg in the a.m., and simvastatin 40 mg at bedtime. He does not use any herbals or supplements. He is a retired postal worker and finished college. He has no family history of AD or other neurological diseases.

Review of systems: The patient denies weight loss, visual changes, or difficulties with swallowing. He denies difficulties with chest pain or shortness of breath. There is no history of asthma or pulmonary disease. He denies diarrhea. He has urinary frequency at night. He has no bleeding difficulties, heat/cold intolerance, or mood difficulties. He admits to occasional early-morning awakening. His sugars have been well controlled.

On physical examination he is well nourished and in no acute distress. Blood pressure is 135/70; HR is 78. The HR is regular, and RR is 12. On MMSE testing he gets a 27/30. He loses 1 point for attention and 2 points for memory. Cranial nerve testing reveals a normal fundoscopic examination, full visual fields, PERRLA, EOMI; he has mildly saccadic pursuits. Facial sensation is intact bilaterally to light touch. Motor strength is symmetric bilaterally. Hearing is intact bilaterally to finger rub. Palate, tongue, and uvula are midline. Sternocleidomastoid motor strength is 5/5 bilaterally. Motor strength is 5/5

in the upper and lower extremities, with normal tone and no drift. Reflexes are 2/4 throughout the upper extremities, 3/4 at the patella, 1/4 at the ankles, and toes are down-going. Sensory testing is normal to light touch, proprioception, and vibration, and decreased to pinprick to the knees. Coordination testing reveals normal finger-to-finger and heel-to-shin testing. Gait is normal, with ability to tandem. No carotid bruits are detected. Heart: regular rate and rhythm, with no murmurs, rubs, or gallops. Pulmonary: lungs clear to auscultation.

You discuss with the patient and his son that the patient's memory loss has progressed and that it is clear that his driving is impaired. You outline that his recent ticket and his son's testimonial are concerning. In addition you discuss that you predict that his driving will continue to worsen with his AD progression. You note that he is having more difficulties due to his cognitive problems and that he has had worsening of his cognitive testing on his examination today. You discuss that you would like for him to stop driving, and you ask the patient his opinion of the matter. He agrees that he should stop driving before he "kills someone." He agrees to hand over his keys to his son.

You provide him with a list of local resources to help with transportation. You contact the social worker and local office of the Council on Aging and request that they coordinate some discussions with the patient on coping with this loss of independence and provide suggestions for local transportation resources. You communicate with the son that you will need him to enforce this no-driving policy, which can be done by taking the keys. You review the driving requirements of your state to ensure that documentation has been provided to the Department of Motor Vehicles if required. You encourage the son to call you if there are any difficulties with enacting this plan. Greater than 50% of this 45-min visit is spent counseling the patient and the family about AD and its impact on driving. A follow-up is arranged for 3 mos.

Questions

For patients with dementia, there is sufficient evidence that all of the following characteristics except _____ are useful for identifying patients at increased risk for unsafe driving:

- A. The Clinical Dementia Rating scale
- B. A caregiver's rating of a patient's driving ability as "marginal" or "unsafe"
- C. A history of crashes or traffic citations
- D. Neuropsychological testing
- E. Reduced driving mileage or self-reported situational avoidance

The correct answer is D. There is insufficient evidence to support or refute the benefit of neuropsychological testing, after controlling for the presence and severity of dementia, or compensatory strategies for drivers with dementia (Level U).¹

A Mini-Mental State Examination (MMSE) score of _____ is possibly useful for identifying patients at increased risk for unsafe driving:

- A. 28 or less

- B. 27 or less
- C. 26 or less
- D. 25 or less
- E. 24 or less

The correct answer is E. An MMSE score of 24 or lower is possibly useful for identifying patients at increased risk for unsafe driving.

Diagnosis Coding

Alzheimer's disease has its own code in ICD-9-CM:²

331.0 Alzheimer's disease

There is a special instruction for this category:

Use additional code, where applicable, to identify dementia:

with behavioral disturbance (**294.11**)

without behavioral disturbance (**294.10**)

There is not a specific V code to describe the situation of driving violations.

The final coding for this case would therefore be:

331.0 Alzheimer's disease

294.10 Dementia in conditions classified elsewhere without behavioral disturbance

E&M Coding for the Outpatient Visit

You have spent 45 minutes with the patient, and more than 50% of the time was spent in counseling and coordination-of-care activities. In this case, you would bill code 99215, which is the level 5 code for an established patient. You should include a sentence or two on the topics which constitute counseling and coordination of care (the severity of his dementia, driving, alternative transportation, coping with loss of independence, review of driving requirements).

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1. Iverson DJ, Gronseth GS, Reger MA, et al. Practice Parameter Update: Evaluation and management of driving risk in dementia. Report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology*® 2010;74:1316–1324. Epub 2010 April 27.
2. Centers for Disease Control and Prevention. International classification of diseases, ninth revision, clinical modification (ICD-9-CM). www.cdc.gov/nchs/icd/icd9cm.htm.

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