

CASE STUDY

Mr. Ying

Mr. Ying is an 84-year-old Asian male who lives in an apartment that adjoins his son's house. Mr. Ying is accompanied to this clinic visit by his son who assists with the history. Although previously outgoing and social, Mr. Ying recently has been limiting his outside activities.

Self-Assessment

Mr. Ying completes the *Stay Independent* brochure in the waiting room. He circles "Yes" for the statements, "I use or have been advised to use a cane or walker to get around safely," "Sometimes I feel unsteady when I am walking," and "I am worried about falling." His responses result in a risk score of 4.

Medical History

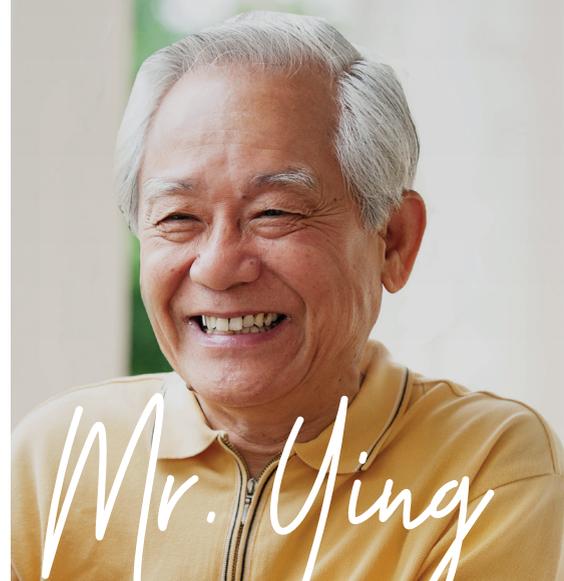
Mr. Ying stated that for the past year, he has felt dizzy when he stands up, after sitting or lying down, and that he often needs to "catch himself" on furniture or walls shortly after standing. His dizziness is intermittent, but happens several times per week.

Mr. Ying cannot identify any recent changes in his medications or other changes to his routine that would explain his symptom. He says there is no pattern and he experiences dizziness at different times during the day and evening. He denies experiencing syncope, dyspnea, vertigo, or pain accompanying his dizziness.

Mr. Ying also remarks that—independent of his dizziness symptoms—he feels unsteady on his feet when walking. His son mentions that he often sees his father "teetering." Mr. Ying requires help with bathing. He has started using a cane, but doesn't like to use it inside.

When asked about previous falls, he says he hasn't fallen. However, he says his elderly neighbor recently fell and is now in a nursing home. Now he's fearful about falling and becoming a burden to his family.

Although Mr. Ying has spinal stenosis, a recent steroid injection has relieved severe low back pain. Now he suffers only from lower back stiffness for several hours in the morning. He denies any specific weakness in his legs.



Risk score:

4

ASSESSMENT

Gait, Strength, and Balance

(Completed and documented by the medical assistant)

Timed Up and Go:

15 seconds using his cane

Gait: slow with shortened stride and essentially no arm swing. No tremor, mild bradykinesia

30-Second Chair Stand:

9 stands in 30 seconds

Able to rise from the chair without using his arms to push himself up

4-Stage Balance Test:

*10 seconds side-by-side;
3 seconds semi-tandem stance*

Able to stand with his feet side-by-side for 10 seconds, but in a semi-tandem stance loses his balance after 3 seconds



Medications

MEDICATION	DOSE	TIMING
Valsartan	80 mg	daily
Citalopram	40 mg	daily
Tamsulosin	0.8 mg	at bedtime
Finasteride	5 mg	daily
Atorvastatin	40 mg	at bedtime
Omeprazole	20 mg	daily
Cyanocobalamin	1000 mcg	daily
Cetirizine	10 mg	daily
Fluticasone	50 mcg/spray, 2 sprays, each nostril	daily
Gabapentin	600 mg	3x daily
Acetaminophen	500 mg-1000 mg	up to 4x daily as needed for pain
Brimonidine tartate	0.15%; 1 drop in both eyes	3x daily
Dorzolamide	2%/timolol 0.5%, 1 drop in both eyes	2x daily
Latanoprost	0.005%, 1 drop, both eyes	at bedtime
Trazodone	50 mg	at bedtime
Calcium carbonate chewable	500 mg chewable	up to 3x daily as needed

PROBLEM LIST

- Hypertension
- L3-5 spinal stenosis and chronic low back pain and leg numbness/paresthesias
- Depression
- Benign prostatic hypertrophy, with 3-4x/night nocturia and occasional incontinence
- Hyperlipidemia
- Gastroesophageal reflux disease
- B12 deficiency
- Allergic rhinitis
- Glaucoma
- Nummular eczema

REVIEW OF SYMPTOMS

- Positive for fatigue
- Poor vision in his left eye
- Constipation
- Nocturia 3-4 times a night
- Frequent urinary incontinence
- Low back stiffness
- Difficulty concentrating
- Depression
- Dry skin
- Hoarseness
- Nasal congestion



Physical Exam

Constitutional	This is a thin, alert, older Asian male in no apparent distress, pleasant and cooperative, but with a notably flat affect.
Vitals	Supine – 135/76, 69; Sitting – 112/75, 76; Standing – 116/76, 75. BMI 19.
Head	Normocephalic/atraumatic.
ENMT	Acuity with corrective lenses: 20/30 R, 20/70 L.
CV	Regular rate and rhythm normal S1/S2 without murmurs, rubs, or gallops.
Respiratory	Clear to auscultation bilaterally.
GI	Bowel sounds decreased in LLQ, firm, non-tender, mildly distended.
Musculoskeletal	UE strength 5/5 bilaterally; LE strength 4+/5 bilateral hip flexors/abductors and bilateral knee flexors/extensors, remainder LE normal. No knee joint laxity. Foot exam shows no calluses, ulcerations, or deformities.
Neurology	Cognitive screen: recalled 2 out of 3 items.
Whisper test for hearing	Intact.
Tone/abnormal movements	Tone is mildly increased in both legs; normal tone in both arms. Sensation is intact to light touch and pain throughout. Reflexes are normal and symmetric.
Psych	PHQ-2 = 4/6.

Identified Fall Risk Factors

Mr. Ying's answers on the *Stay Independent* brochure and the results of the assessment tests indicate gait, strength, and balance impairments, and a fear of falling.

- His orthostatic blood pressure results indicate postural hypotension. He is currently taking three medications that can directly affect and decrease blood pressure: valsartan, tamsulosin, and finasteride.
- He is currently taking four medications that may affect cognition: citalopram, gabapentin, cetirizine, and trazodone.
- Other fall risk factors are poor vision, nocturia >2 times a night, incontinence, and depression.



Fall Prevention Recommendations

1. Attempt to stop, switch, or reduce medications affecting blood pressure or causing cognitive impairment.
2. Consider non-pharmacologic options for symptom and condition management.
3. Implement strategies to address urinary symptoms and depression.
4. Recommend at least 800 IU of vitamin D as a daily supplement for fall risk reduction.
5. Counsel on self-management of orthostatic hypotension (drink 6-8 glasses of water a day, do ankle pumps and hand clenches for a minute before standing, do not walk if dizzy), and provide the patient brochure, *Postural Hypotension: What it is and How to Manage it*.
6. Discuss fall prevention, tailoring your suggestions based on the “Stages of Change” model. Emphasize that many falls can be prevented.
7. Provide the CDC fall prevention brochures, *What YOU Can Do to Prevent Falls* and *Check for Safety*.
8. Recommend using night lights, or leaving the hall and/or bathroom lights on overnight to reduce the risk of falling when getting up to void.
9. Recommend having grab bars installed inside and outside the tub, next to the toilet, and in the hallway that leads from his bedroom to the bathroom.
10. Refer to an eye specialist for an eye exam, glaucoma assessment, and an updated prescription.
11. Refer to a physical therapist for pain and gait assessment to increase leg strength, improve balance, and provide instruction on how to use a cane correctly.
12. Consider referring to an occupational therapist to conduct a comprehensive assessment to identify appropriate home modifications and to provide education to reduce his chances of falling.

CDC’s STEADI tools and resources can help you screen, assess, and intervene to reduce your patient’s fall risk. For more information, visit www.cdc.gov/steady

