February 3, 2025 AHD Questions

1. A 37-year-old woman is evaluated for secondary fracture prevention 3 months after surgery for a right distal radius fracture sustained from a fall. Family history is significant for low bone mass in her mother. Her only medication is an ethinyl estradiol and norgestimate oral contraceptive. Her medical history is otherwise unremarkable.

Physical examination is normal. BMI is 22.

Which of the following is the most appropriate management?

A. Bone mineral density measurement
B. Calcium supplementation
C. Fracture Risk assessment score calculation
D. Oral contraceptive discontinuation
E. Therapeutic lifestyle interventions

2. A 66-year-old woman is evaluated in follow-up for osteoporosis. Initial treatment with alendronate resulted in upper gastrointestinal symptoms that resolved with discontinuation. After receiving intravenous zoledronic acid 1 year ago, she experienced mild body aches, nausea, and headache peaking the day after the infusion and resolving by day 3.

Serum calcium level is 10.1 mg/dL (2.5 mmol/L). Serum creatinine level is 0.9 mg/dL (79.6 μmol/L).

The patient is concerned about a more severe reaction with the next zoledronic acid infusion.

Which of the following is the most appropriate management?

A. Decrease the rate of infusion
B. Pretreat with prednisone and diphenhydramine
C. Pretreat with oral calcium
D. Switch to denosumab
E. Reassure the patient

3. A 58-year-old woman is evaluated for a 1-week history of palpitations and dyspnea. She reports having symptoms of mild exertional dyspnea, episodic palpitations, and fatigue 3 weeks earlier, for which she was evaluated in the emergency department with CT angiography for suspected pulmonary embolism. Results were negative. Her symptoms resolved, but then they reappeared 1 week ago. She otherwise has been well and takes no medications.

On physical examination, blood pressure is 150/80 mm Hg, pulse rate is 102/min and irregularly irregular, and oxygen saturation is 95% breathing ambient air. Other than tachycardia with an irregular rhythm, cardiopulmonary examination is normal. She has a large multinodular goiter with multiple nodules approximately 2 cm without one dominant nodule.

Laboratory studies show a thyroid-stimulating hormone level of less than 0.01 μU/mL (0.01 mU/L), free thyroxine level of 2.3 ng/dL (30.0 pmol/L), and total triiodothyronine level of 230 ng/dL (3.5 nmol/L).

ECG shows atrial fibrillation.

Which of the following is the most appropriate initial step in management?

A. Methimazole and propranolol initiation
B. Thyroid nodule fine-needle aspiration biopsy
C. Thyroid scintigraphy with radioactive iodine uptake
D. Thyroid ultrasonography

4. A 75-year-old woman is evaluated in follow-up for abnormal thyroid function test results. The test was obtained to evaluate unexplained weight gain over the previous 6 months. She reports no additional symptoms such as fatigue, cold intolerance, or constipation. She has no other medical concerns.

On physical examination, pulse rate is 82/min. BMI is 26. The thyroid is normal size and without nodules.

Laboratory studies show a thyroid-stimulating hormone level of 9 μU/mL (9 mU/L) and a free thyroxine level of 1.0 ng/dL (12.9 pmol/L).

Which of the following is the most appropriate management?

A. Initiate levothyroxine
B. Measure triiodothyronine level
C. Repeat thyroid function studies in 6-8 weeks
D. No additional management