**October 1, 2024 MKSAP Questions**

1. A 44-year-old woman is evaluated during a follow up visit for chronic hypertension. Over the past month, her blood pressure measured with home blood pressure monitoring was 145/90 mm Hg. There is no family history of hypertension. She has no other medical problems. The patient adheres to a low sodium diet. Medications are maximal doses of amlodipine and lisinopril.

On physical examination, blood pressure is 148/96 mm Hg, and pulse rate is 64/min; other vital signs are normal. BMI is 26. The remainder of the examination is unremarkable.

Laboratory studies show a serum creatinine of 0.8 mg/dL and normal electrolyte levels. Urinalysis shows no blood, protein, or leukocyte esterase.

**Which of the following is the most appropriate next step in management?**

1. Add chlorthalidone
2. Measure plasma aldosterone concentration/ plasma renin activity ratio
3. Measure plasma fractionated metanephrines
4. Obtain renal artery imaging
5. A 46-year-old man is evaluated for confirmed primary hypertension. The patient is asymptomatic and takes no medications. He is a current smoker with a 20-pack-year history. Family history is significant for hypertension in his mother and father. His father had a stroke at age 55 years.

On physical examination, blood pressure is 154/96 mm Hg in both arms, pulse rate is 74/min, and respiration rate is 18/min. BMI is 30. The remainder of the examination is normal.

**Laboratory studies:**

Fasting lipid profile:

 Total cholesterol: 220 mg/dL

 LDL cholesterol: 160 mg/dL

 HDL cholesterol: 48 mg/dL

Creatinine 1.0 mg/dl

Electrolytes: normal

Glucose, fasting : 80 mg/dL

Urinalysis: No protein, erythrocytes, or leukocytes

A 12-lead ECG is normal.

The patient is instructed in lifestyle modifications, including smoking cessation, exercise, and a low sodium diet. Moderate intensity atorvastatin is intiated.

**Which of the following is the most appropriate additional therapy?**

1. Amlodipine
2. Amlodipine-valsartan
3. Chlorthialidone
4. Valsartan
5. A 73-year-old woman is evaluated during a follow-up visit for stage G4 chronic kidney disease. She reports no uremic symptoms. Medical history is significant for hypertension. Medications are atenolol, chlorthalidone, cholecalciferol, hydralazine, and nifedipine.

**Laboratory studies:**

Calcium: 8.7 mg/dL

Creatinine: 2.0 mg/dL

Phosphorus: 5.4 mg/dL

Parathyroid hormone: 97 pg/mL

25-hydroxyvitamin D: 60 ng/mL

Estimated glomerular filtration rate: 24 mL/min/1.73m2

**Which of the following is the most appropriate management?**

1. Calcitriol
2. Calcium acetate
3. Cinacalcet
4. Low phosphate diet
5. Sevelamer
6. A 55-year-old woman is evaluated during a routine visit. She was diagnosed with chronic kidney disease 3 years ago. For the past year, she has had increasing fatigue. She reports no shortness of breath or chest pain. Medications are lisinopril, furosemide, calcium acetate, ferrous sulfate, and a multivitamin. She is up to date on age-appropriate vaccinations and cancer screening.

On physical examination, temperature is normal, blood pressure is 100/70 mm Hg, pulse rate is 76/min, and respiration is 14/min. BMI is 30. Abdominal examination is normal.

**Laboratory studies:**

Hemoglobin: 8.9 g/dL

Mean corpuscular volume: 91 fL

Reticulocyte count: 1% of erythrocytes

Creatinine: 2 mg/dL

Folate: normal

Ferritin: 600 ng/mL

Transferrin saturation %: 33%

Vitamin B12: normal

**Which of the following is the most appropriate intervention?**

1. Add ascorbic acid
2. Add an erythropoiesis-stimulating agent
3. Perform a blood transfusion
4. Switch from oral to intravenous iron therapy
5. A 55-year-old woman is evaluated for worsening muscle weakness. She has end-stage kidney disease. Due to a recent family gathering, she was not adherent to her low-potassium diet. She has not been dialyzed for 3 days.

Vital signs are normal. Examination reveals diffuse muscular weakness of the lower extremities.

Serum potassium level is 8.0 mEq/L and blood glucose is 114 mg/dL.

ECG shows tall, peaked T waves.

Intravenous (IV) calcium gluconate is administered. Emergent hemodialysis is planned for later today.

**Which of the following is the most appropriate additional treatment?**

1. IV glucose and insulin
2. IV high-dose furosemide
3. IV sodium bicarbonate
4. Oral patiromer