Hypertension Case Study
MSN

C.S. is a 4o-year-old male who attends a community health screening.   He states that he has not seen a health care provider in a "really long time." He is a truck driver who eats mainly fast food while on the road. He smokes a pack of cigarettes a day "just for something to do during the long hours of driving and to keep me calm." C.S. is 5 ft., 9 in tall and weighs 230 lb. His BP is 182/104, heart rate 90, respirations 24, and temperature 97.0°F.

      1. What risks factors for hypertension does C.S. have?
- Tobacco use
- Obesity
- Stress
- Excess dietary sodium
- Sedentary lifestyle
- Socioeconomic status
- Gender

      2. What clinical manifestations of hypertension would you assess for in C.S.?
-Fatigue
-Dizziness
-Palpitations
-Angina
-Dyspnea
-headaches
-nosebleeds

      3. What complications will you assess C.S. for?
-Coronary artery disease: high risk
-Left ventricular hypertrophy: sustained high blood pressure increases cardiac workload and causes (LVH).
- Heart failure: compensatory mechanisms are overwhelmed, and heart can no longer pump enough blood to meet the body's blood demand.
-Cerebrovascular Disease: the risk for stroke happening is 4 times higher.
-Peripheral Vascular Disease: a aortic aneurysm, and aortic dissection.
-Nephrosclerosis: chronic kidney disease.
-Retinal Damage: damage to the retinal vessels, like the vessel damage in the heart, brain, and kidneys.

C.S. is referred to his health care provider to follow up on his high blood pressure screening.
    4. What diagnostic studies might you expect the health care provider to order for C.S.?
Establishing baseline levels is important before starting therapy. I would expect the provider to order routine urinalysis, BUN, serum creatinine levels are used to screen for renal involvement and provide baseline information about the kidney function. Creatinine clearance reflects the glomerular filtration rate. Decreases in creatinine clearance indicate renal insufficiency. Measurement of serum electrolytes, especially potassium is essential to detect hyperaldosteronism, a cause of secondary hypertension. Blood glucose levels are used to help diagnosis of diabetes. A lipid profile shows risk

factors and CVD. Uric acid levels establish a baseline since the levels often rise with diuretic therapy. An ECG identifies the presence of LVH, cardiac ischemia, or any previous MI. If any LVH is suspected an echocardiography is often done.

C.S.'s BP is monitored for several visits and remains elevated. His serum cholesterol, BUN, and creatinine levels are elevated. His creatinine clearance (glomerular filtration rate) is below normal, demonstrating renal insufficiency.

    5. What type of lifestyle modifications would you recommend for C.S. to control his BP?

      Some lifestyle modifications I would recommend for C.S. to control his BP would be weight loss, better nutritional diet such as the DASH eating plan: which contains fruits, vegetables, fat free or low-fat milk, whole grains, fish poultry, beans, seeds, and nuts. Also reducing his sodium intake. Promoting physical activity, a minimum of 150 minutes of exercise a week. I would also encourage him to avoid using tobacco products, as it is a major risk fact for CVD.