

Hypertension

PR, the 54 year old office manager in a law firm, found out his older brother Mike just got admitted in the hospital due to stroke. PR lost his father 2 years ago after an extensive myocardial infarction. Being concerned about his own health, PR makes an office visit with his physician. After physical examination and preliminary lab work the following information was collected:

Vital signs:

- HR: 83 beats/min
- RR: 16 breath/min
- T: 98.7 °F
- BP: 165/100 mmHg
- Ht: 5'9"
- Wt: 215 lbs.

Lab finding:

- | | |
|---|--------------------|
| • Na: 146 mEq/L | N: 135 - 145 mEq/L |
| • K: 4.1 mEq/L | N: 3.5 - 5 mEq/L |
| • BUN: 10 mg/dl | N: 5 - 20 mg/dl |
| • Creatinin: 0.8 mg/dl | N: 0.6 - 1.2 mg/dl |
| • FBS: 135 mg/dl | N: 70 – 100 mg/dl |
| • Total cholesterol: 295 mg/dl | N: 140-199 |
| • LDL cholesterol: 140 mg/dl | N: <130 |
| • HDL cholesterol: 30 mg/dl | N: 35-70 |
| • Triglyceride: 150 mg/dl | N: 35-160 |
| • Urinalysis: WNL (Within Normal Limit) | |

1. What stage of HTN does PR have?
2. The physician recommended having his blood pressure measured again. What pathophysiologic value do you see for this recommendation? Support your answer with at least two reasons.
3. If PR's hypertension is confirmed to be primary HTN, how do you rule out the following secondary hypertensions?
 - a. Chronic Renal failure
 - b. Glomerulonephritis
 - c. Primary hyperaldosteronism

4. What modifiable risk factors do you recognize in this patient for developing cardiovascular disease? What suggestions do you have to control these risk factors?

5. Provide a list of five recommended and five prohibited food products for this patient. Explain your rationale for each item.

6. PR is asking you about the outcomes of uncontrolled HTN. Elaborate your answer on the effect of HTN on the following organs:
 - a. Blood vessels
 - b. Heart
 - c. Brain
 - d. Kidney
 - e. Eye