COMPREHENSIVE CASE STUDY: COPD, Heart Failure, Hypertension and Diabetes Mellitus

Review the following case study and complete the questions that follow. For this assignment, write your responses to each question as one narrative rather than separating your responses by question number. Include an introduction and a conclusion. Submit your answers using APA format, well-written sentences, and detailed explanations. Your analysis must be scientifically sound, necessary, and sufficient. Paper must be a minimum of 8 pages, plus references and title page.

You must also include a bibliography of at least 3 sources (with at least one non Internet source). Refer to the rubric for more information on how your assignment will be graded.

**Case Study**

M.K. is a 45-year-old female, measuring 5’5” and weighs 225 lbs. M.K. has a history of smoking about 22 years along with a poor diet. She has a history of Type II diabetes mellitus along with primary hypertension. M.K. has recently been diagnosed with chronic bronchitis. Her current symptoms include chronic cough, more severe in the mornings with sputum, light-headedness, distended neck veins, excessive peripheral edema, and increase urination at night. Her current medications include Lotensin and Lasix for the hypertension along with Glucophage for the Type II diabetes mellitus.

The following are lab findings that are pertinent to this case:

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| **Vitals** | |
| BP | 158/98 mm Hg |
| **CBC** | |
| Hematocrit | 57% |
| Glycosylated hemoglobin (HbA1c) | 7.3 % |
| **Arterial Blood Gas Assessment** | |
| PaCO₂ | 52 mm Hg |
| PaO₂ | 48 mm Hg |
| **Lipid Panel** | |
| Cholesterol | 242 mg/dL |
| HDL | 32 mg/dL |
| LDL | 173 mg/dL |
| Triglycerides | 1000 mg/dL |

1. What clinical findings correlate with M.K.’s chronic bronchitis? What type of treatment and recommendations would be appropriate for M.K.’s chronic bronchitis?
2. Which type of heart failure would you suspect with M.K.? Explain the pathogenesis of how this type of heart failure develops.
3. According to the American Heart Association 2017 new guidelines, and M.K.'s B.P. value, what stage of hypertension is she experiencing? Explain the rationale for her current medications for her hypertension. Also, discuss the impact of this disease in the U.S. population.
4. According to the lipid panel, what other condition is M.K. at risk for? According to this case study, what other medications should be given and why? What additional findings correlate for both hypertension and Type II diabetes mellitus?

 Interpret the lab value for HbA1c and explain the rationale for this value in relation to normal/abnormal body function?