Case Study 5: R.P. Lehne Ch. 57

Scenario

R.P. is a 19-year-old female who has been complaining to her mother of being thirsty all the time and that she has to frequently leave class to go to the bathroom. R.P's mother takes her to the local clinic. R.P.'s vital signs are T 98.6 F., HR 80 beats/min, RR 18 breaths/min. and blood pressure 138/88 mm Hg. She weighs 161 pounds and is 5 feet, 4 inches tall with a BMI of 28.7

The HCP orders lab work and she is to return to the clinic in 1 week. R.P.'s lab results are

WBC 5200/mm^3	RBC 5 million/mm^3
BUN 22 mg/Dl	Creatinine 1.4 mg/Dl
Potassium 3.5 mEq/L	Sodium 144 mEq/L
Fasting BG 212 mg/Dl	Hb A1C 9.8% T/Hgb
Total cholesterol 230mg/Dl	Triglycerides 167 mg/Dl
LDL 200 mg/Dl	HDL 40 mg/Dl

R.P. is diagnosed with T2DM and prescribed metformin 500 mg twice daily with food.

1. The patient's mother asks which blood sugar test is the most significant one in determining a person is diabetic. What is your best response as a nurse?

2. You are discussing the metformin with R.P. and her mother.
   a. What is the classification of the drug?
   b. What is the best explanation for the use of this drug?
   c. What side effects are most common with metformin?
   d. Prolonged use of metformin placed RP at risk for what vitamin deficiency?
   e. Which lab value will be monitored while RP is taking metformin?

3. R.P.'s current BMI is 28.7, what health promotion strategies would be included in patient health teaching?

One year later R.P. leaves work with due to nausea and vomiting. When she arrives home, she tells her mother she has abdominal pain, muscle pain, and headache. Her mother gives RP an over the counter medication for nausea and vomiting. Several hours later her mother observes that RP is very drowsy and has a weak, rapid pulse. Her mother checks RP's blood glucose, and it is 720 mg/Dl. After arriving at the emergency department, RP admits she quit taking her medication one month ago.

Lab & Diagnostic Testing Results

Serum glucose 421	Sodium 145	Potassium 6.0
BUN 40	Creatine 2.0	AST 21 IU/L
ALT 27 IU/L		
Serum ketones - positive		
ABG results: Ph 7.25, PCo2 44, HCO3 17		
Urine ketones – positive		

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After viewing the lab results the HCP orders an insulin infusion of regular insulin in 100 ml of 0.9% saline titrated per protocol orders.

1. The nurse is aware the regular insulin will begin the correct which laboratory values?

2. What is the priority nursing intervention while RP is receiving intravenous insulin?

3. The regular insulin infusion was begun at 0730. When will the nurse begin to monitor for any symptoms of hypoglycemia?

4. Interpret the ABG's

5. The finding of these lab results supports what diagnosis?

R.P. recovers and will be going home with insulin glargine 36 units subcutaneous injection once daily.

1. What patient teaching should R.P. receive before leaving the hospital? Should RP's mother be present during the teaching?

2. What side effects or complications of insulin glargine should you teach RP about?

3. The nurse understands the patient needs further education in diet and exercise. List 3 teachings examples for each.