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Case Study 3: Y.L.

Scenario:

Y.L. makes an appointment to come to the clinic where you are employed. She has been complaining of chronic fatigue, increased thirst, constantly being hungry, and frequent urination. She denies any pain, burning, or low back pain on urination. She tells you she has a vaginal yeast infection that she has treated numerous times with OTC (over the counter) medication. She admits to starting smoking since going back to work full time as a clerk in a loan company. She also complains of having difficulty reading numbers and reports making frequent mistakes. She says by the time she gets home and makes supper for her family, then puts her child to bed, she is too tired to exercise. She reports feet hurt; they often "burn or feel like there are pins in them." She reports that after her delivery, she went back to her traditional eating pattern which you know is high in carbohydrates. In reviewing Y.L.'s chart, you notice she has not been seen since the delivery of her child 6 years ago. She has gained a considerable amount of weight; her current weight is 173 lb. Today her BP is 152/97 mm Hg and her plasma glucose is 291 mg/dL. The PCP (primary care provider) orders the following labs: UA, HbA1c (hemoglobin A1c), fasting CMP, CBC, fasting lipid profile, and a baseline 24-hour urine collection to assess Creatinine clearance. The lab values are as follows: fasting glucose 184 mg/dL, A1c 10.4, UA +glucose, -ketones, cholesterol 256 mg/dL, triglycerides 346 mg/dL, LDL (low-density lipids) 155 mg/dL, HDL (high-density lipids) 32 mg/dL, ratio 8.0. Y.L. is diagnosed with type 2 diabetes. After meeting with Y.L. and discussing management therapies, the PCP decides to start MDI (multiple dose injection) insulin therapy and have the patient count carbohydrates. Y.L. is scheduled for education classes and is to work with the diabetes team to get her blood sugar under control.

1. Identify the three methods used to diagnose DM.

- UA, HbA1C, Fasting CMP, CBC, fasting lipid profile and a baseline 24hr urine collection to assess Creatinine clearance

2. Identify three functions of insulin.

- Regulates blood sugar levels
- Promotes glucose uptake
- Glycogenesis
- Lipogenesis
- Protein synthesis

3. Insulin's main action is to lower blood sugar levels. Several hormones produced in the body inhibit the effects of insulin. Identify three.

- Glucagon
- Cortisol
- Growth Hormone
- Epinephrine

4. Y.L. was stated on lispro (Humalog) and glargine (Lantus) insulin with carbohydrate counting. What is the most important point to make when teaching the patient about glargine?

- Use at the same time every day once a day (most times at bedtime/long acting)

5. Because Y.L. has been on regular insulin in the past, you want to make sure she understands the difference between regular and lispro. What is the most significant difference between these two insulins?

- Insulin lispro is a human insulin meaning it is absorbed more quickly and last a shorter length of time than regular insulin, so EAT 15 MINS BEFORE OR TAKE WITH A MEAL

6. What is the peak time and duration for lispro insulin?

- Peaks in 30-90 minutes and keeps working for 2-4 hours

7. Y.L. wants to know why she can't take NPH and regular insulin. She is more familiar with them and has taken them in the past. Explain why the provider chose lispro and glargine insulin over NPH and regular insulin?

- Better long term glycemic control, with a reduction in nocturnal hypoglycemia

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Case Study 4: N.J.

Scenario:

N.J. is a 65-year-old widow who lives alone. She has a long history of type 2 diabetes and hypertension. N.J. is not employed. She has very limited savings and relies on Social Security benefits for income. She smokes about half a pack of cigarettes a day and has been a smoker since she was in her 20s. She drinks alcohol "a couple of times a year, usually a glass of wine at a special dinner." N.J. has a sore on her ankle that she has noticed for the last several months. The sore does not hurt much, but she has been unable to get it to heal. The cashier at the convenience store tells her that she should use butter to help heal wounds because the butter keeps the wound moist and helps to enhance healing. N.J. decides to follow the cashier's advice and applies butter to her wound for a week. The wound does not seem to be getting any better; in fact, it looks worse. It now has yellowish drainage, and the skin around the wound has become red. Her foot also hurts when she walks on it. N.J. stops the butter treatment and goes to the emergency department.

1. What are the priority nursing diagnoses for N.J.?
- Type 2 Diabetes
- Hypertension
- Sore on Ankle

2. What discharge teaching will you provide her?
- Take all medications as prescribed
- Try to start limiting the number of cigarettes being smoked a day until ceasing if possible
- DO NOT use butter on the ankle wound, the only thing that should be used is an antibiotic or any skin regimen that was prescribed by the Dr
- When showering or cleaning the wound make sure to check the water temperature with your elbow or thermometer, to avoid any further damage or burns
- If you want to use any kind of lotion, lean towards non scented and make sure to only apply thin layers around the feet, and not allow any to get clumped in between toes
- If you decide to buy new shoes wear them in small increments at a time to prevent any more sores/wounds
- When in bed elevate your lower leg so that your ankle doesn't have any kind of pressure on the top or bottom, reducing the chance for more damage to the sore
- Recommend support groups since she lives alone, or get her involved in an accountability program

3. How can you advocate for N.J. regarding required medical equipment, supplies, medications, and their cost on a limited budget?
- Get in touch with a case/social worker within the hospital to meet with N.J. about different options that she has to help get her set up with whatever medical care/support that she's needing

4. What expectation would you anticipate for N.J. regarding follow-up care?
- Possible need for transportation
- Updated medications lists
- Healing of the ankle wound
- Stopped smoking or has limited smoking
- Support groups and community groups