Case Study, Chapter 52, Assessment and Management of Patients With Endocrine Disorders

1. Don Smart, 55 years of age presents to the family physician to follow up on some symptoms he recently developed. The patient states that he is extremely tired and is having trouble concentrating. He states that his skin is dry and flaky. His nails are brittle and his hair is dry, dull, and falls out as he showers. He is 8 weeks postop after a modified radical neck procedure for laryngeal cancer and has completed the external radiation therapy. He is using a Blom--Singer prosthesis for speech. He states that his appetite is poor, yet he is gaining weight. The patient's current medications include metformin (Glucophage) for a history of type 2 diabetes, digoxin 0.25 mg every day for a history of atrial fibrillation, and warfarin therapy being managed by the family physician for thromboembolism prophylaxis related to atrial fibrillation. The physician orders the following **lab work**: CBC with differential, serum albumin, TSH, FT4, PT, and INR. (Learning Objective 3)

a. What is the rationale for the labs ordered, based on the symptoms that the patient is exhibiting?
    - Mr. Smart is showing manifestations of hypothyroidism so a lab for TSH and T4 are requested. TSH will show how much TSH the pituitary gland is producing and T4 will show if the thyroid is producing thyroxine. The weigth gain is indicative of inadequate T3 and T4 circulating.
    - The PT and INR are ordered to monitor Mr. Smart's warfarin therapy.

b. The physician follows up with the patient with the diagnosis of hypothyroidism. What are reasons why the patient developed hypothyroidism?
    - He had a radical neck procedure done for laryngeal cancer and radiation therapy which could've messed his with his thyroid functions.

c. Based on the results of the TSH and FT4, the physician starts the patient on levothyroxine (Synthroid) 0.025 mg/day and to have follow-up TSH and FT4 labs and visit to the oncologist in 4 weeks. The physician informs the patient that he will continue to have lab tests and monthly follow-up until the TSH and FT4 are stable. What is the rationale for this treatment plan?
    - Levothyroxine replaces or provides more thyroid hormone. The main purpose of the therapy is to balance out the thyroid hormones so that Mr. Smart can perform ADL normally.

d. What nursing interventions should the nurse provide the patient?

- Rest
- Avoid external heat exposure
- Protect against cold
- Increase fluids
- Pulmonary exercises

2. Mrs. Ramirez was admitted to the hospital for wrist surgery secondary to rheumatoid arthritis. Postoperatively, she is stabilized and transferred to the general surgery unit. Mrs. Ramirez's medications include digoxin, Lasix, captopril, Synthyroid, aspirin, Protonix, and prednisone. When administering morning medications, Mrs. Ramirez refuses her aspirin and prednisone, and the nurse holds the medications. Over the next 3 days, Mrs. Ramirez continues to refuse the prednisone, and the medication is not administered. On the third postoperative day, Mrs. Ramirez becomes hypotensive, tachycardic, and has a decrease in level of consciousness. **STAT labs** are sent for a complete blood cell count and chemistry panel, and the physician is notified of the change in patient status. On review of the patient's record, the physician notes that Mrs. Ramirez has not received her prednisone for 4 days. Mrs. Ramirez has been on Prednisone for the past 5 years for her rheumatoid arthritis, and the physician begins to treat the patient for acute adrenal insufficiency. (Learning Objectives 7 and 9)

a. What other clinical manifestations should the nurse monitor for with suspected adrenal insufficiency?
    - Weakness/fatigue
    - Anorexia
    - GI symptoms
    - Dark pigmentation of skin and mcosa
    - Low blood glucose
    - Low sodium
    - High potassium

b. The physician prescribes a STAT dose of IV hydrocortisone. What is the rationale for this medication in this situation?
    - It is the treatment of choice for adrenal insufficiency. In adrenal insufficiency, there is low levels of cortisol, hydrocortisone can help balance the levels. It can also be a treatment for rheumatoid arthritis.