

## ENDOCRINE DISORDER

1. **B.** increased body temperature, increased pulse, and increased blood pressure

Thyroid storm is characterized by SNS activation. Thyroid hormones potentiate effects of catecholamines (epinephrine/norepinephrine). Therefore, all vital signs will be increased.

2. **A, B, C, F**

(a) The client with hyperthyroidism may experience exophthalmos. This requires instillation of eye drops to prevent dryness and ulceration of the cornea.

(b and f) The client experiences weight loss because of hypermetabolism. Several, small, well-balanced meals are given to improve nutritional status of the client and daily weights should be monitored. Weight is the most objective indicator of nutritional status.

(c) The client is usually exhausted due to restlessness and agitation. Frequent rest periods help the client regain energy.

3. **A.** hoarseness of voice

Laryngeal nerve damage is manifested by severe hoarseness of voice of "whispery voice".

4. **A.** vasopressin (Pitressin Synthetic)

Because diabetes insipidus results from decreased antidiuretic hormone (vasopressin) production, the nurse should expect to administer synthetic vasopressin for hormone replacement therapy. Furosemide, a diuretic, is contraindicated because a client with diabetes insipidus experiences polyuria. Insulin and dextrose are used to treat diabetes mellitus and its complications, not diabetes insipidus.

5. **C.** Deposits of adipose tissue in the trunk and dorsocervical area

Because of changes in fat distribution, adipose tissue accumulates in the trunk, face (moonface), and dorsocervical areas (buffalo hump). Hypertension is caused by fluid retention. Skin becomes thin and bruises easily because of a loss of collagen. Muscle wasting causes muscle atrophy and thin extremities.

6. **A.** Hypocalcemia

The client who has undergone a thyroidectomy is at risk for developing hypocalcemia from inadvertent removal or damage to the parathyroid gland. The client with hypocalcemia will exhibit a positive Chvostek's sign (facial muscle

contraction when the facial nerve in front of the ear is tapped) and a positive Trousseau's sign (carpal spasm when a blood pressure cuff is inflated for a few minutes). These signs aren't present with hypercalcemia, hypokalemia, or hyperkalemia.

7. **C.** Myxedema coma.

Severe hypothyroidism may result in myxedema coma, in which a drastic drop in the metabolic rate causes decreased vital signs, hypoventilation (possibly leading to respiratory acidosis), and nonpitting edema. Thyroid storm is an acute complication of hyperthyroidism. Cretinism is a form of hypothyroidism that occurs in infants. Hashimoto's thyroiditis is a common chronic inflammatory disease of the thyroid gland in which autoimmune factors play a prominent role.

8. **A.** Serum glucose level.

Hyperglycemia, which develops from glucocorticoid excess, is a manifestation of Cushing's syndrome. With successful treatment of the disorder, serum glucose levels decline. Hirsutism is common in Cushing's syndrome; therefore, with successful treatment, abnormal hair growth also declines. Osteoporosis occurs in Cushing's syndrome; therefore, with successful treatment, bone mineralization increases. Amenorrhea develops in Cushing's syndrome. With successful treatment, the client experiences a return of menstrual flow, not a decline in it.

9. **B.** Puffiness of the face and hands

Hypothyroidism (myxedema) causes facial puffiness, extremity edema, and weight gain. Signs and symptoms of hyperthyroidism (Graves' disease) include an increased appetite, weight loss, nervousness, tremors, and thyroid gland enlargement (goiter).

10. **D.** Imbalanced nutrition: Less than body requirements related to thyroid hormone excess

In the client with hyperthyroidism, excessive thyroid hormone production leads to hypermetabolism and increased nutrient metabolism. These conditions may result in a negative nitrogen balance, increased protein synthesis and breakdown, decreased glucose tolerance, and fat mobilization and depletion. This puts the client at risk for marked nutrient and calorie deficiency, making Imbalanced nutrition: Less than body requirements the most important nursing diagnosis. Options B and C may be appropriate for a client with hypothyroidism, which slows the metabolic rate.

11. **B.** Thyroid crisis

Thyroid crisis usually occurs in the first 12 hours after thyroidectomy and causes exaggerated signs of hyperthyroidism, such as high fever, tachycardia, and extreme restlessness. Diabetic ketoacidosis is more likely to produce polyuria, polydipsia, and polyphagia; hypoglycemia, to produce weakness, tremors, profuse perspiration, and hunger. Tetany typically causes uncontrollable muscle spasms, stridor, cyanosis, and possibly asphyxia.

12. **A.** antidiuretic hormone (ADH).

ADH is the hormone clients with diabetes insipidus lack. The client's TSH, FSH, and LH levels won't be affected.

13. **C.** Restricting fluids

To reduce water retention in a client with the SIADH, the nurse should restrict fluids. Administering fluids by any route would further increase the client's already heightened fluid load.

14. **A.** Risk for infection

Addison's disease decreases the production of all adrenal hormones, compromising the body's normal stress response and increasing the risk of infection. Other appropriate nursing diagnoses for a client with Addison's disease include Deficient fluid volume and Hyperthermia. Urinary retention isn't appropriate because Addison's disease causes polyuria.

15. **C.** Tachycardia

Levothyroxine, a synthetic thyroid hormone, is given to a client with hypothyroidism to simulate the effects of thyroxine. Adverse effects of this agent include tachycardia. The other options aren't associated with levothyroxine.

16. **A.** Depression

Agitation, irritability, poor memory, loss of appetite, and neglect of one's appearance may signal depression, which is common in clients with Cushing's syndrome. Neuropathy affects clients with diabetes mellitus — not Cushing's syndrome. Although hypoglycemia can cause irritability, it also produces increased appetite, rather than loss of appetite. Hyperthyroidism typically causes such signs as goiter, nervousness, heat intolerance, and weight loss despite increased appetite.

17. **B.** Neck vein distention

SIADH secretion causes antidiuretic hormone overproduction, which leads to fluid retention. Severe SIADH can cause such complications as vascular fluid overload, signaled by neck vein distention. This syndrome isn't associated with tetanic contractions. It may cause weight gain and fluid retention (secondary to oliguria).

18. **A.** Fluid intake is less than 2,500 ml/day

Diabetes insipidus is characterized by polyuria (up to 8 L/day), constant thirst, and an unusually high oral intake of fluids. Treatment with the appropriate drug should decrease both oral fluid intake and urine output. A urine output of 200 ml/hour indicates continuing polyuria. A blood pressure of 90/50 mm Hg and a heart rate of 126 beats/minute indicate compensation for the continued fluid deficit, suggesting that treatment hasn't been effective.

19. **C.** To report weight loss, anxiety, insomnia, and palpitations.

Weight loss, anxiety, insomnia and palpitations are signs of hyperthyroidism. An adjustment in dose would need to be obtained in order to reach a therapeutic level of levothyroxine (Synthroid) in the patient with hypothyroidism.

20. **D.** fever and sore throat.

Fever and sore throat are signs of a serious adverse reaction in PTU and should be reported immediately.

21. **D.** signs and symptoms of hypothyroidism

Excessive dosing with propylthiouracil (PTU) may convert the client from a hyperthyroid state to a hypothyroid state. If this occurs, the dosage should be reduced. Temporary administration of thyroid hormone may be required.

Propylthiouracil is not used for pain and does not cause hyperglycemia or renal toxicity.

22. **A.** in the morning to prevent insomnia

Levothyroxine (Synthroid) is a synthetic thyroid hormone that increases cellular metabolism. Levothyroxine should be given in the morning in a single dose to prevent insomnia and should be given at the same time each day to maintain an adequate drug level. Therefore, options B, C, and D are incorrect.

23. **B.** Avoid close contact with children or pregnant women for one week after administration of drug.

After receiving radioactive iodine-131, you should avoid prolonged, close contact

with other people for several days, particularly pregnant women and small children. The majority of the radioactive iodine that has not been absorbed leaves the body during the first two days following the treatment, primarily through the urine. Small amounts will also be excreted in saliva, sweat, tears, vaginal secretions, and feces.

24. **B.** Replace intravenous fluids

**C.** Induce shivering

**D.** Relieve respiratory distress

**E.** Administer a cooling blanket

Rapid treatment of thyroid storm is essential to preserve life. Treatment includes cooling without aspirin (which increases free TH) or inducing shivering, replacing fluids, glucose, and electrolytes, relieving respiratory distress, stabilizing cardiovascular function, and reducing TH synthesis and secretion. #1 is incorrect because cooling happens without the use of aspirin. All of the other choices are correct.

25. **C.** "Decreased renal blood flow and glomerular filtration rate reduces the kidney's ability to excrete water, which may cause hyponatremia."

Rationale:

a. Is incorrect because deficient amounts of TH cause abnormalities in lipid metabolism with elevated serum cholesterol and triglyceride levels.

b. Is incorrect because Graves' disease is the most common cause of hyperthyroidism, not hypothyroidism.

d. Is incorrect because increased amounts of TH cause an increase in cardiac output and peripheral blood flow.

26. **A.** Mitotane is used to treat metastatic adrenal cancer.

Mitotane directly suppresses activity of the adrenal cortex and decreases peripheral metabolism of corticosteroids. It is used to treat metastatic adrenal cancer.

b. Is incorrect because aminoglutimide may be administered to clients with ectopic ACTH-secreting tumors that cannot be surgically removed.

c. Is incorrect because ketoconazole inhibits, not increases, cortisol synthesis by the adrenal cortex.

d. Is incorrect because somatostatin suppresses, not increases, ACTH secretion.

27. **C.** Instruct the client to never abruptly discontinue the medication.

The primary medical treatment of Addison's disease is replacement of corticosteroids and mineralocorticoids, accompanied by increased sodium in the diet. The client needs to know the importance of maintaining a diet high in sodium and low in potassium. Medications should never be discontinued abruptly because crisis can ensue. Oral forms of the drug are given with food in Cushing's disease.

28. **A.** Maintain careful use of medical and surgical asepsis when providing care and treatments.

Use careful medical and surgical asepsis when providing care and treatments since Cortisol excess increases the risk of infection.

29. **B.** "I need to weigh myself if I think that I am losing or gaining weight."

The client is at risk for ineffective therapeutic regimen management. Clients with Addison's disease must learn to provide lifelong self-care that involves varied components: medications, diet, and recognizing and responding to stress. Changes in lifestyle are difficult to maintain permanently. The client needs to take the medications on a daily basis. The client needs to perform daily weights to monitor for signs of dehydration. The client needs to maintain a diet high in sodium and low in potassium, as well as maintain an increased fluid intake.

30. **B.** increased urine output, increased serum sodium, and decreased urine specific gravity

(rationale- the patient with SIADH has water retention with hyponatremia, decreased urine output and concentrated urine with high specific gravity. improvement in the patient's condition reflected by increased urine output, normalization of serum sodium, and more water in the urine, decreasing the specific gravity.)

31. **D.** autoimmune-induced atrophy of the gland

(rationale- both Graves disease and Hashimoto's thyroiditis are autoimmune disorders that eventually destroy the thyroid gland, leading to primary hypothyroidism. Thyroid tumors most often result in hyperthyroidism. Secondary hypothyroidism occurs as a result of pituitary failure, and iatrogenic hypothyroidism results from thyroidectomy or radiation of the thyroid gland.)

32. **B.** provides written instruction for all information related to the medication therapy

(rationale- because of the mental sluggishness, inattentiveness, and memory loss that occur with hypothyroidism, it is important to provide written instructions and repeat information when teaching the patient. Caloric intake can be increased when drug therapy is started, because of an increased metabolic rate, and replacement therapy must be taken for life. Although most patients return to a normal state with treatment, cardiovascular conditions and psychoses may persist.

33. **A.** HTN, peripheral edema, and petechiae

(rationale- The effects of glucocorticoid excess include weight gain from accumulation and redistribution of adipose tissue, sodium and water retention, glucose intolerance, protein wasting, loss of bone structure, loss of collagen, and capillary fragility. Clinical manifestations of corticosteroid deficiency include hypotension, dehydration, weight loss, and hyperpigmentation of the skin.)