

Nursing patients notes essay sample



**ASSIGN
BUSTER**

I. Describe the role of the following hormones in the formation of urine, specifically explain the stimulus for their release, actions (decrease/increase GFR) and whether or not dilute/concentrated urine results):

ADH (Vasopressin) - ADH has an antidiuretic action that prevents the production of dilute urine. Formation of urine = in the DCT and collecting ducts, water movement out of the body is regulated by ADH. Stimulus for their release = lowered blood pressure or low salt or water concentration in the blood will stimulate the release of ADH from the posterior pituitary. Actions (decrease/increase GFR) = increased ADH would decrease the GFR and a decrease in ADH would increase GFR. Dilute/Concentrated Urine Results = if there is a high amount of ADH, water moves out and will produce concentrated urine and if ADH is absent water will not be reabsorbed and will produce dilute urine.

Renin-Angiotensin-Aldosterone System

Stimulus for their release = if blood pressure drops dramatically this will trigger renin secretion from the JG cells, renin acts on angiotensinogen to form angiotensin I, angiotensin I is converted to angiotensin II therefore angiotensin II causes mean arterial pressure to rise and stimulates the adrenal cortex to release aldosterone. As a result, both systemic and glomerular hydrostatic pressure rises. Actions (decrease/increase GFR) = the efferent arteriole constricts, forcing blood to build up in the glomerulus, which maintains the GFR. The activation of the RAAS causes a decrease in GFR. Dilute/Concentrated Urine Results = activation of the Renin-Angiotensin-Aldosterone System will result in concentrated urine results.

Atrial Natriuretic Peptide (ANP) Hormone

Stimulus for their release = large increase in blood volume promotes release of ANP. Actions = result is more urinary output, less blood volume and decreased blood pressure. GFR will increase with the release of ANP.

Dilute/Concentrated Urine Results = urine will be more dilute.

II. Diabetic patients (with hyperglycemia), typically have symptoms of polyuria, polydipsia and polyphagia. Define these terms and explain why these patients are polyuric and polydipsic.

Polyuria is the excessive secretion of urine. Polydipsia causes blood hyperosmolarity, this condition activates the thirst center in hypothalamus and makes the subject drink excessive water.

Polyphagia is excessive eating.

Patients that are polyuric can have diabetes, diabetes mellitus, premenstrual syndrome, urinary stones. Common causes are bladder conditions, congestive heart failure, cystitis, or generalized anxiety disorder. Uncommon causes include anorexia nervosa, interstitial cystitis, and sickle-cell anaemia. Rare causes can be different types of cancer, Cushing's syndrome and pituitary tumors.

Patients that are polydipsic can possibly be diagnosed with diabetes insipidus and diabetes mellitus. Often as one of the initial symptoms, and in those who fail to take their anti-diabetic medications or whose dosages have become inadequate. It can also be caused by a change in the osmolality of the extracellular fluids of the body, hypokalemia, decreased blood volume

and other conditions that create a water deficit. This is usually a result of osmotic diuresis. Polydipsia is also a symptom of anticholinergic poisoning. Zinc is also known to reduce symptoms of polydipsia by causing the body to absorb fluids more efficiently (reduction of diarrhea induces constipation) and it causes the body to retain more sodium; thus a zinc deficiency can be a possible cause. Antipsychotics can have side effects such as dry mouth that may make the patient feel thirsty.

III. A 45-year-old patient was admitted to the hospital with a diagnosis of cirrhosis of the liver. He is thin and malnourished. His abdomen is very large due to an accumulation of fluid in the abdominal cavity. His lower extremities are very swollen.

A. Explain why these changes have occurred.

B. The nurse is observing him closely for the possibility of gastrointestinal bleeding. Why is this considered a possible complication?

C. Explain the effect of his conditions on his GFR and why.

MODULE IV-TOPIC 2- DISCUSSIONS (GRADED): ACID-BASE/pH-BALANCE

For full credit, your participation is require in at LEAST 3 (Out of 4) of the clinical scenerios. Good luck this week as you prepare for Module IV Lecture Exam with these concepts.

1. Gossip, an undergraduate, has normal PCO₂ levels, high H⁺ levels, low pH and bicarbonate levels. What type of disturbance is Gossip suffering from

and what might cause this? If his PCO₂ were elevated, would your answer change? Explain.

Gossip is experiencing metabolic acidosis. Metabolic acidosis focuses on decreased bicarbonate and decreased pH levels. Common causes are loss of bicarbonate due to diarrhea, accumulation of acid (ketosis), and renal dysfunction. Yes, if PCO₂ levels were elevated but only if she were to continue to have low pH levels, Gossip would most likely be experiencing respiratory acidosis because that is caused from increase PCO₂ and decreased pH.

2. Diabetes mellitus produces many homeostatic imbalances, including acidosis. The pH imbalance is due to ketoacidosis, which results from excessive accumulation of byproducts of fat metabolism, as the body cannot meet energy needs from carbohydrate metabolism. Sally is a teenaged diabetic who sometimes rebels by not taking her insulin. Her mother takes her to the hospital because her breathing has become deep and gasping. Explain Sally's breathing pattern. What other compensatory responses may occur and would they occur earlier or later than the respiratory response?

I think Sally is experiencing metabolic acidosis, and the respiratory response is hyperventilation which increases loss of CO₂ hence the reason she is breathing deeply and gasping. Also, if compensation is complete, pH will be within normal range but HCO₃⁻ will be low.

3. Mary, a nursing student, has been caring for burn patients. She notices that they consistently show elevated levels of potassium in their urine and wonders why. What would you tell her?

Patients who have burns will lose a profuse amount of water, becoming hypovolemic, as well as electrolytes and become dehydrated quickly. The body wants to try and maintain homeostasis so the Renin-Angiotensin-Aldosterone system will activate to conserve as much sodium as possible; for every three sodium ions withheld in the system, the body pumps two potassium ions out into urine excretion. The body is trying to hold on to more sodium so there is more potassium being excreted in the urine.

4. Why does potassium concentration rise in patients with acidosis? What is this called? What effects does it have?

MODULE V-TOPIC 1- DISCUSSIONS (GRADED): DEVELOPMENT

1. Describe the role of Corpus luteum:

1A. post ovulation and

1B. post implantation (if pregnancy occurred)

2. A 25-year-old woman stated that it had been six weeks since her last menses. Her pregnancy test was positive. By the sixth month of pregnancy, she felt irregular contractions of the uterus but no complications were present. After nine months, a healthy, 7 lb., 3 oz girl was delivered with no complications. Breast feeding was planned.

2A. What hormonal component is the basis of pregnancy tests?

2B. What prevented the uterus from initiating labor before the designated delivery time?

2C. Describe the positive feedback systems that occur during labor and delivery

2D. What maintains milk production after birth?

2E. Is it possible to get pregnant during the time of breast feeding? Explain your answer. [pic][pic][pic]