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| **Maryland Next Gen NCLEX Test Bank Project**  **September 1, 2022** | | | |
| **Case Study Topic**:  (& Stand-alone bow-tie) | Anorexia with dehydration | **Author:** | E. Myers MSN-Ed RN CHPN  Frederick Community College |

**Case Summary**

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| A 16-year old female with an eating disorder is seen in the Emergency Department for fainting episodes. The client is found to be severely underweight, dehydrated, and bradycardic and is admitted overnight to treat the dehydration. |

**Objectives**

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| 1. Apply knowledge of pathophysiology when measuring vital signs  2. Compare laboratory values to normal  3. Manage care of a client with a fluid and electrolyte imbalance  4. Provide care and education for acute and chronic psychosocial health issues |

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| **Case Study Link** | **Case Study QR Code** |
| <https://umaryland.az1.qualtrics.com/jfe/form/SV_8GmZrsTAO3wP9mC> |  |
| **Bow-tie QR Code** | **Bow-tie Link** |
|  | <https://umaryland.az1.qualtrics.com/jfe/form/SV_8hKflnpqaiatOuy> |

**Case References**

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| 1. *Videbeck. (2019). Psychiatric-mental Health Nursing. Wolters Kluwer* |

**Case Study Question 1 of 6**

The 16-year-old client is seen in the Emergency Department for evaluation of fainting episodes.

* Click to highlight the 3 findings that require **immediate** follow-up.

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| **Nurses’ Notes** |
| 1100. 16-year-old female brought to the Emergency Department via car by parents. Client reports syncopal episodes upon standing and appears drowsy. Has a history of anorexia and reports constipation, decreased urine output, amenorrhea, and weakness. Assessment findings include poor skin turgor and lanugo. Oriented to person, place, time, and situation. Weight/BMI: 38 kg/14.84 kg/m2 T 96.8F (36C), P 56, RR 15, B/P 88/58. Pulse oximeter 95% on RA. Echocardiogram shows no abnormality. ECG – sinus bradycardia. Labs drawn. | |

Key

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| **Nurses’ Notes** |
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**Scoring Rule: +/-**

**Rationale:** Decreased urine output and poor skin turgor are signs of dehydration and require immediate follow up. The B/P listed is hypotensive and most likely requires intervention. Amenorrhea, lanugo and constipation are signs of prolonged malnutrition and not life-threatening complications.

**Case Study Question 2 of 6**

The 16-year-old client is seen in the Emergency Department for evaluation of fainting episodes.

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| **Nurses’ Notes** |
| 1100. 16-year-old female brought to the Emergency Department via car by parents. Client reports syncopal episodes upon standing and appears drowsy. Has a history of anorexia and reports constipation, decreased urine output, amenorrhea, and weakness. Assessment findings include poor skin turgor and lanugo. Oriented to person, place, time, and situation. Weight/BMI: 38 kg/14.84 kg/m2 T 96.8F (36C), P 56, RR 15, B/P 88/58. Pulse oximeter 95% on RA. Echocardiogram shows no abnormality. ECG – sinus bradycardia. Labs drawn. | |

The nurse reviews the client’s history of anorexia and potential causes of the most urgent presenting symptoms.

For each finding click to indicate if the finding is consistent with dehydration, hypoglycemia, or anemia. Each finding may support more than one type of condition.

|  |  |  |  |
| --- | --- | --- | --- |
| Findings | Dehydration | Hypoglycemia | Anemia |
| Poor skin turgor | * \* |  |  |
| Hypotension | * \* | * \* | * \* |
| Syncope | * \* | * \* | * \* |
| Decreased urine | * \* |  | * \* |

Note: Each column must have at least 1 response option selected.

**Scoring Rule: +/-**

**Rationale:** Dehydration typically results in poor skin turgor, hypotension, decreased urine output, and can result in syncope. Hypoglycemia can cause hypotension and syncope. Anemia can cause hypotension and decreased urine output.\* Anemia is also seen in clients with renal disease.

**Case Study Question 3 of 6**

The 16-year-old client is seen in the Emergency Department for evaluation of fainting episodes.

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| **Nurses’ Notes** | | |
| 1100. 16-year-old female brought to the Emergency Department via car by parents. Client reports syncopal episodes upon standing and appears drowsy. Has a history of anorexia and reports constipation, decreased urine output, amenorrhea, and weakness. Assessment findings include poor skin turgor and lanugo. Oriented to person, place, time, and situation. Weight/BMI: 38 kg/14.84 kg/m2 T 96.8F (36C), P 56, RR 15, B/P 88/58. Pulse oximeter 95% on RA. Echocardiogram shows no abnormality. ECG – sinus bradycardia. Labs drawn. | | | | | | | | |
| **Flowsheet** | | |
| Orthostatic VS | Lying | | | Sitting | | | Standing |
| Time | 1130 | | | 1133 | | | 1136 |
| T | 96.7F/35.9C | | | 96.8F/36C | | | 96.7F/35.9C |
| P | 55 | | | 56 | | | 86 |
| RR | 15 | | | 16 | | | 22 |
| B/P | 110/70 | | | 96/68 | | | 88/60 |
| **Laboratory Report** | | |
| Lab | | | Results | | Reference range | | | |
| Hematocrit | | 34% | | | | Males: 42-52%;Females: 35-47% | | |
| Hemoglobin | | 11 g/dl | | | | Males: 13-18 g/dL; Females:12-16 g/dL | | |
| Potassium(serum) | | 3.4 mEq/L | | | | 3.5 to 5 mEq/L | | |
| Sodium (serum) | | 133 mEq/L | | | | 135 to 145 mEq/L | | |
| Glucose (fasting) | | 95 mg/dL | | | | Normal < 99 mg/dL | | |

The labs return and the nurse obtains orthostatic vital signs.

* Complete the following sentence by choosing from the list of options.

|  |  |
| --- | --- |
| The client is most likely experiencing | Select |
| Anemia  Hypovolemia\*  Hypoglycemia |
| as evidenced by the | Select |
| Blood glucose |
| Electrolytes\* |
| Hemoglobin and hematocrit |
| and the | Select |
| Blood pressure\* |
| Heart rate |
| Temperature |

**Scoring Rule: 0/1**

**Rationale:** The changes in the blood pressure indicate orthostatic hypotension and hypovolemia. The client glucose is within defined parameters. While the hemoglobin and hematocrit are slightly low, they are not low enough to explain the client’s symptoms.

**Case Study Question 4 of 6**

The 16-year-old client is seen in the Emergency Department for evaluation of fainting episodes.

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| **Nurses’ Notes** | |
| 1100. 16-year-old female brought to the Emergency Department via car by parents. Client reports syncopal episodes upon standing and appears drowsy. Has a history of anorexia and reports constipation, decreased urine output, amenorrhea, and weakness. Assessment findings include poor skin turgor and lanugo. Oriented to person, place, time, and situation. Weight/BMI: 38 kg/14.84 kg/m2 T 96.8F (36C), P 56, RR 15, B/P 88/58. Pulse oximeter 95% on RA. Echocardiogram shows no abnormality. ECG – sinus bradycardia. Labs drawn.  1145. Provider diagnosed client with hypovolemia and orthostatic hypotension and ordered the client be admitted to the medical-surgical unit. Client is tearful and withdrawn stating “I am going to gain so much weight here. I worked so hard to be thin.” | | | | | | | |
| **Flowsheet** | |
| Orthostatic VS | Lying | | Sitting | | | Standing |
| Time | 1130 | | 1133 | | | 1136 |
| T | 96.7F/35.9C | | 96.8F/36C | | | 96.7F/35.9C |
| P | 55 | | 56 | | | 86 |
| RR | 15 | | 16 | | | 22 |
| B/P | 110/70 | | 96/68 | | | 88/60 |
| **Laboratory Report** | |
| Lab | | Results | | Reference range | | | |
| Hematocrit | | 34% | | | Males: 42-52%;Females: 35-47% | | |
| Hemoglobin | | 11 g/dl | | | Males: 13-18 g/dL; Females:12-16 g/dL | | |
| Potassium(serum) | | 3.4 mEq/L | | | 3.5 to 5 mEq/L | | |
| Sodium (serum) | | 133 mEq/L | | | 135 to 145 mEq/L | | |
| Glucose (fasting) | | 95 mg/dL | | | Normal < 99 mg/dL | | |

The nurse begins to plan the client’s care.

* For each potential order, click to specify whether the order is appropriate or not appropriate to include in the plan of care.

|  |  |  |
| --- | --- | --- |
| Potential Order | Appropriate | Not appropriate |
| Make client NPO |  | * \* |
| Daily Weights at 0600 | * \* |  |
| Give 1,000ml 0.9% NS IV at 125ml/hr x 8 hours | * \* |  |
| Contact isolation |  | * \* |
| Begin tube feeding now |  | * \* |
| Strict I & O | * \* |  |
| Give 20 mEq Potassium Chloride PO daily at 0800 | * \* |  |
| Psychiatric consult | * \* |  |
| Liquid nutritional supplement | * \* |  |

**Scoring Rule: 0/1**

**Rationale:** The client needs to begin gradual refeeding and would not be NPO. The client has no evidence of dysphagia and would not need tube feedings. The client has a low K+ and would benefit from potassium supplementation. The client is hypovolemic and needs fluid replacement. Anorexic clients need strict I & O to ensure adequate intake and that no purging is occurring. The anorexic client will also need a daily weight and psychiatric consult. The client’s fear of gaining weight is a sign of unmanaged anorexia. The client shows no signs of infection and would not need contact isolation. Liquid nutritional supplements can assist with caloric intake and prevention of refeeding syndrome.

**Case Study Question 5 of 6**

16-year-old client with fainting episodes is admitted to the medical surgical unit to treat the dehydration.

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| **Nurses’ Notes** | |
| 1100. 16-year-old female brought to the Emergency Department via car by parents. Client reports syncopal episodes upon standing and appears drowsy. Has a history of an eating disorder and reports constipation, decreased urine output, amenorrhea, and weakness. Assessment findings include poor skin turgor and lanugo. Oriented to person, place, time, and situation. Weight/BMI: 38 kg/14.84 kg/m2 T 96.8F (36C), P 56, RR 15, B/P 88/58. Pulse oximeter 95% on RA. Echocardiogram shows no abnormality. ECG – sinus bradycardia. Labs drawn.  1145. Provider diagnosed client with hypovolemia and orthostatic hypotension and ordered the client be admitted to the medical-surgical unit. Client is tearful and withdrawn stating “I am going to gain so much weight here. I worked so hard to be thin.”  1300 . Transferred to medical surgical unit for medical management. IV fluids started. | | | | | | | | |
| **Flowsheet** | |
| Orthostatic VS | Lying | | Sitting | | | Standing |
| Time | 1130 | | 1133 | | | 1136 |
| Temp | 96.7F/35.9C | |  | | |  |
| P | 55 | | 56 | | | 64 |
| RR | 15 | | 16 | | | 22 |
| B/P | 110/70 | | 96/68 | | | 88/60 |
| **Laboratory Report** | |
| Lab | | Results | | Reference range | | | | |
| Hematocrit | | 34% | | | Males: 42-52%;Females: 35-47% | | | |
| Hemoglobin | | 11 g/dl | | | Males: 13-18 g/dL; Females:12-16 g/dL | | | |
| Potassium(serum) | | 3.4 mEq/L | | | 3.5 to 5 mEq/L | | | |
| Sodium (serum) | | 133 mEq/L | | | 135 to 145 mEq/L | | | |
| Glucose (fasting) | | 95 mg/dL | | | Normal < 99 mg/dL | | | |
| **Orders** | |
| * 1.Orthostatic VS daily & routine vital signs every 4 hours. * Strict I & O * 3.Daily Weights at 0600am * Give 1,000ml 0.9% NS IV at 125ml/hr x 8 hours. * 5. Give 20 mEq Potassium Chloride PO daily at 0800, first dose now. | | | | | | | |

The nurse receives orders.

* Which tasks can the nurse delegate to the UAP? Select all that apply.
* Obtain and record daily weights \*
* Take and document routine vital signs \*
* Take and document orthostatic vital signs \*
* Give client potassium 20mEq PO
* Record and document intake and output\*
* Educate client on medical complications of anorexia.

**Scoring Rule: +/-**

**Rationale:** The UAP cannot administer medications, draw routine labs or educate the client on medical complications of anorexia. The UAP may document and take weights and vital signs. The UAP can document strict intake and output.

**Case Study Question 6 of 6**

16-year-old client with fainting episodes is admitted to the medical surgical unit to treat the dehydration.

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| **Nurses’ Notes** | |
| 1100. 16-year-old female brought to the Emergency Department via car by parents. Client reports syncopal episodes upon standing and appears drowsy. Has a history of anorexia and reports constipation, decreased urine output, amenorrhea, and weakness. Assessment findings include poor skin turgor and lanugo. Oriented to person, place, time, and situation. Weight/BMI: 38 kg/14.84 kg/m2 T 96.8F (36C), P 56, RR 15, B/P 88/58. Pulse oximeter 95% on RA. Echocardiogram shows no abnormality. ECG – sinus bradycardia. Labs drawn.  1145. Provider diagnosed client with hypovolemia and orthostatic hypotension and ordered the client be admitted to the medical-surgical unit. Client is tearful and withdrawn stating “I am going to gain so much weight here. I worked so hard to be thin.”  1300. Transferred to medical surgical unit for medical management. IV fluids started.  1715. Client has improved with IV fluids. Vital signs stable. Voided 300mL urine. Psychiatrist with client for assessment. Client to be admitted to a Partial Hospitalization Program in AM. | | | | | | | | | |
| **Flowsheet** | |
| Orthostatic VS | Lying | | Sitting | | | Standing | Lying | Sitting | Standing |
| Time | 1130 | | 1133 | | | 1136 | 1700 | 1703 | 1706 |
| Temp | 96.7F/35.9C | |  | | |  | 96.7F/35.9C |  |  |
| P | 55 | | 56 | | | 64 | 58 | 64 | 66 |
| RR | 15 | | 16 | | | 22 | 16 | 18 | 17 |
| B/P | 110/70 | | 96/68 | | | 88/60 | 108/72 | 110/70 | 108/74 |
| **Laboratory Report** | |
| Lab | | Results | | Reference range | | | | | |
| Hematocrit | | 34% | | | Males: 42-52%;Females: 35-47% | | | | |
| Hemoglobin | | 11 g/dl | | | Males: 13-18 g/dL; Females:12-16 g/dL | | | | |
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| **Orders** | |
| * Orthostatic VS daily & routine vital signs every 4 hours. * Strict I & O * 3.Daily Weights at 0600am * Give 1,000ml 0.9% NS IV at 125ml/hr x 8 hours. * Give 20 mEq Potassium Chloride PO daily at 0800, first dose now. | | | | | | | | | | |

The nurse has implemented the treatment plan and provided education on the medical complications and the psychosocial components of anorexia.

* For each finding, click to specify if the statement indicates an understanding, or no understanding of the education provided.

|  |  |  |
| --- | --- | --- |
| Statement | Understanding | No Understanding |
| “I need to develop non-food related coping skills like journaling to manage my emotions.” | * \* |  |
| “I am cured and once I am discharged, I will not need to continue with any professional support. |  | * \* |
| “I grew extra hair on my body because, my body did not have enough fat to keep me warm.” | * \* |  |
| “My fainting spells were caused by my body not having enough fluid.” | * \* |  |
| “My family and I should talk extensively about what and when I am eating to keep me on track.” |  | * \* |

**Scoring Rule: 0/1**

**Rationale:** The client needs to develop non-food coping skills. The client should be discharged into a partial hospitalization program for further support as anorexia does not resolve quickly. The severe body image distortion and maladaptive coping skills need to be addressed further after discharge. The lanugo developed from insufficient fat on the client’s body. The hypovolemia was caused by dehydration. The client and family should avoid talking only about food as this can support the client’s fixation with weight.

**Bowtie**

The 16-year-old client is seen in the emergency department for evaluation of fainting episodes.

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| **Nurses’ Notes** | | |
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| Lab | | | Results | | Reference range | | | |
| Hematocrit | | 34% | | | | Males: 42-52%;Females: 35-47% | | |
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| Sodium (serum) | | 133 mEq/L | | | | 135 to 145 mEq/L | | |
| Glucose (fasting) | | 95 mg/dL | | | | Normal < 99 mg/dL | | |

* Complete the diagram by dragging from the choices below to specify what condition the client is most likely experiencing, 2 actions the nurse should take to address that condition, and 2 parameters the nurse should monitor to assess the client’s progress.

|  |  |  |
| --- | --- | --- |
| Action to take |  | Parameter to monitor |
|  | Condition most likely experiencing |  |
| Action to take |  | Parameter to monitor |
|  |  |  |
| **Actions to take** | **Potential conditions** | **Parameters to monitor** |
| Potassium Supplementation\* | Dehydration\* | Urine output\* |
| Glucagon | Hypoglycemia | Point of care blood glucose |
| Blood transfusion | Severe anemia | Electrolytes\* |
| Oxygen 2L via NC | Shock | Pulse oximeter |
| IV fluid\* |  | Hemoglobin/hematocrits |

**Scoring Rule: 0/1**

**Rationale:** The client is most likely experiencing dehydration. There is no evidence of severe anemia, hypoglycemia or shock at this time. The client needs potassium supplementation and IV fluids to correct the fluid and electrolyte imbalance. The client does not need a blood transfusion at this time, oxygen levels are stable, and no oxygen is needed. Urine output will need to be monitored to assess improved fluid balance. Blood glucose does not need to be checked as the client has no signs of hypoglycemia. Pulse oximetry is not needed as this is stable. The client needs routine electrolyte monitoring but there is no need to monitor hemoglobin and hematocrit as this is stable.