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| **Maryland Next Gen NCLEX Test Bank Project**  **January 25, 2023** | | | |
| **Case Study Topic**:  Stand-alone Trend | Dehydration Alzheimer’s Disease | **Author:** | Mary DiBartolo, PhD, RN-BC, CNE, FGSA, FAAN  Salisbury University |

**Case Summary**

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| This case will focus on the care of the hospitalized older adult who is admitted with dehydration and acute renal failure with secondary diagnosis of Alzheimer’s disease. It will explore the nurse’s role in care of the client with dehydration, but also modifying care and communication for the client with Alzheimer’s disease, as well as, monitoring for the potential complication of delirium superimposed on dementia. |

**Objectives**

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| 1. Identify indicators of dehydration in the older adult client.  2. State risk factors and symptoms in the older adult client with dehydration.  3. Recognize risk factors that put hospitalized clients at risk for delirium.  4. Note strategies to identify a client with delirium, interventions to address and prevention strategies.  6. Evaluate outcomes related to the client recovering from dehydration and delirium. |

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| **Case Study Link** | **Case Study QR Code** |
| [**https://umaryland.az1.qualtrics.com/jfe/form/SV\_0p32l1GuagVA7K6**](https://umaryland.az1.qualtrics.com/jfe/form/SV_0p32l1GuagVA7K6) |  |
| **Trend QR Code** | **Trend Link** |
|  | <https://umaryland.az1.qualtrics.com/jfe/form/SV_eCCgXepP22LEcHI> |

**Case References**

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| 1. Ignatavicius et al. (2021). *Medical-Surgical Nursing: Concepts for Interprofessional Collaborative Care* 2. Halter, M. J. (2022). *Varcarolis’ foundations of psychiatric-mental health nursing: A clinical approach.* |

**Case Study Question 1 of 6**

The nurse cares for a 72-year-old female admitted to the medical unit with dehydration and secondary diagnosis of mid-stage Alzheimer’s disease.

|  |  |  |  |
| --- | --- | --- | --- |
| **Phase Sheet** | | | |
| Name | Theresa Peters | | | | | | | Gender | F |
| Age | 72 | | | Weight (lbs/kg) | | 122 lb (55 kg) | | Allergies | NKA |
| **Nurses’ Notes** | | | |
| **DAY 1 1800:** Client admitted from ED to medical unit for dehydration after several days of poor PO intake where she appeared to briefly lose consciousness this am after breakfast. Retired for several years as seamstress and husband passed away last year. Now lives with daughter/family due to recent diagnosis of middle stage Alzheimer’s disease, history of mild hypertension & gastroesophageal reflux. Daughter notes appetite has diminished in past 2-3 weeks, and it is hard to get her to drink enough fluids even in the warmer weather. She has been more “down in the dumps” the past few weeks. Client has been unsteady on her feet due to dizziness and increasingly weak. P: 104 and B/P 102/62 (sitting) & 94/55 (standing). Skin & mucous membranes dry; tenting noted. Admission BUN & creatinine elevated. Foley inserted and draining concentrated amber urine. Provider notified; ordered fluid challenge of 500 ml normal saline. Alert/oriented to name only, answers questions, pleasant, cooperative, asking for daughter. | | | | | | | | | |
| **Vital Signs** | | | |
| Time | | **1800** | | |
| T ◦F/ ◦C | | 97.8 F /36.5 C | | |
| P | | 104 | | |
| RR | | 20 | | |
| B/P | | 102/62 | | |
| Pulse oximeter | | 97 | | |
| Oxygen | | Room air | | |
| **Laboratory Report** | | | |
| **Lab** | | | **Results @ 1400 (ED)** | | | | **Reference Range** | | |
| Sodium | | | 146 | | | | 135 to 145 mEq/L | | |
| Potassium | | | 5.0 | | | | 3.5 to 5.0 mEq/L | | |
| Glucose (fasting) | | | 72 | | | | Normal < 99 mg/dL | | |
| BUN | | | 32 | | | | 10-20 mg/dL | | |
| Creatinine | | | 1.5 | | | | 0.9 to 1.4 mg/dL | | |
| Hematocrit | | | 49 | | | | Males: 42-52%; Females: 35-47% | | |
| WBC | | | 6.6 | | | | 4.5 – 10.5 x 103 cells/mm3 | | |

* Which 4 findings are **most** urgent?
* Blood pressure\*
* Sodium
* Potassium
* BUN\*
* Creatinine
* Mucous membranes\*
* Pulse oximeter
* Hematocrit
* Tenting\*

**Scoring rule: 0/1**

Rationale: Given her history of hypertension/controlled on lisinopril, low BP and more concerning are the orthostatic findings, reports of weakness/dizziness/passing out at home in am after breakfast. Dry mucous membranes/tenting are also signs of dehydration. The elevated BUN indicates possible dehydration. The creatinine is only slightly elevated. One would expect hematocrit to increase due to increased RBCs as percentage of blood volume when dehydrated. Pre-albumin slightly decreased but the nutritional issue is not as urgent compared to fluid volume status.

**Case Study Question 2 of 6**

The nurse cares for a 72-year-old female admitted to the medical unit with dehydration and secondary diagnosis of mid-stage Alzheimer’s disease.

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| **Phase Sheet** | | | |
| Name | Theresa Peters | | | | | | | Gender | F |
| Age | 72 | | | Weight (lbs/kg) | | 122 lb (55 kg) | | Allergies | NKA |
| **Nurses’ Notes** | | | |
| **DAY 1 1800:** Client admitted from ED to medical unit for dehydration after several days of poor PO intake where she appeared to briefly lose consciousness this am after breakfast. Retired for several years as seamstress and husband passed away last year. Now lives with daughter/family due to recent diagnosis of middle stage Alzheimer’s disease, history of mild hypertension & gastroesophageal reflux. Daughter notes appetite has diminished in past 2-3 weeks and it is hard to get her to drink enough fluids even in the warmer weather. She has been more “down in the dumps” the past few weeks. Client has been unsteady on her feet due to dizziness and increasingly weak. P: 104 and B/P 102/62 (sitting) & 94/55 (standing). Skin & mucous membranes dry; tenting noted. Admission BUN & creatinine elevated. Foley inserted and draining concentrated amber urine. Provider notified; ordered fluid challenge of 500 ml normal saline. Alert/oriented to name only, answers questions, pleasant, cooperative, asking for daughter. | | | | | | | | | |
| **Vital Signs** | | | |
| Time | | **1800** | | |
| T ◦F/ ◦C | | 97.8 F /36.5 C | | |
| P | | 104 | | |
| RR | | 20 | | |
| B/P | | 102/62 | | |
| Pulse oximeter | | 97 | | |
| Oxygen | | Room air | | |
| **Laboratory Report** | | | |
| **Lab** | | | **Results @ 1400 (ED)** | | | | **Reference Range** | | |
| Sodium | | | 148 | | | | 135 to 145 mEq/L | | |
| Potassium | | | 5.0 | | | | 3.5 to 5.0 mEq/L | | |
| Glucose (fasting) | | | 72 | | | | Normal < 99 mg/dL | | |
| BUN | | | 32 | | | | 10-20 mg/dL | | |
| Creatinine (Serum) | | | 1.5 | | | | 0.9 to 1.4 mg/dL | | |
| Hematocrit | | | 49 | | | | Males: 42-52%;Females: 35-47% | | |
| WBC | | | 6.6 | | | | 4.5 – 10.5 x 103 cells/mm3 | | |

* For each finding, click to specify if the finding is a risk factor or not a risk factor for dehydration.

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| --- | --- | --- |
| **Assessment finding** | **Risk factor** | **Not risk factor** |
| Age | * X |  |
| Hypertension |  | * X |
| Poor PO intake | * X |  |
| Cognitive status | * X |  |
| Gastroesophageal reflux |  | * X |
| **Scoring rule: 0/1**  Rationale: Age (decreased thirst mechanism), cognitive status (Alzheimer’s which can impact intake) and reports of recent poor PO intake by daughter are risk factors for dehydration. History of mild hypertension and GERD are not risk factors. | | |

**Case Study Question 3 of 6**

The nurse cares for a 72-year-old female admitted to the medical unit with dehydration and secondary diagnosis of mid-stage Alzheimer’s disease.

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| **Phase Sheet** | | | |
| Name | Theresa Peters | | | | | | | | | Gender | | F |
| Age | 72 | | | Weight (lbs/kg) | | 122 lb (55 kg) | | | | Allergies | | NKA |
| **Nurses’ Notes** | | | |
| **DAY 1 1800:** Client admitted from ED to medical unit for dehydration after several days of poor PO intake where she appeared to briefly lose consciousness this am after breakfast. Retired for several years as seamstress and husband passed away last year. Now lives with daughter/family due to recent diagnosis of middle stage Alzheimer’s disease, history of mild hypertension & gastroesophageal reflux. Daughter notes appetite has diminished in past 2-3 weeks and it is hard to get her to drink enough fluids even in the warmer weather. She has been more “down in the dumps” the past few weeks. Client has been unsteady on her feet due to dizziness and increasingly weak. P: 104 and B/P 102/62 (sitting) & 94/55 (standing). Skin & mucous membranes dry; tenting noted. Admission BUN & creatinine elevated. Foley inserted and draining concentrated amber urine. Provider notified; ordered fluid challenge of 500 ml normal saline. Alert/oriented to name only, answers questions, pleasant, cooperative, asking for daughter.  **2200:** B/P and P improved after saline bolus. U/O clear yellow and increased to 240 ml in past 4 hrs. Resting quietly, cooperative and no report of dizziness, etc.  **DAY 2 0800:** IV normal saline running at 75 ml/hr. B/P improved to 124/74 and negative for orthostatic changes. Lisinopril dose held this am. Am labs improved—BUN/creatinine WNL.  **1200:** VS stable. Not interested in lunch despite reminders to eat. IV normal saline @ 50 ml/hr. Foley draining adequate amts clear yellow urine. Seems more disoriented, anxious and inattentive. | | | | | | | | | | | | |
| **Vital Signs** | | | |
| Time | | **1800** | | | **2200** | | **0800** | | **1200** | |
| T ◦F/ ◦C | | 97.8 F /36.5 C | | | 98 F / 36.6 C | | 97.8 F/36.5 C | | 98.2/36.7 C | |
| P | | 104 | | | 94 | | 86 | | 84 | |
| RR | | 20 | | | 18 | | 16 | | 18 | |
| B/P | | 102/62 | | | 110/68 | | 120/72 | | 130/76 | |
| Pulse oximeter | | 97 | | | 97 | | 96 | | 97 | |
| Oxygen | | Room air | | | Room air | | Room air | | Room air | |
| **Laboratory Report** | | | |
| **Lab** | | | **Results @ 1400 (ED)** | | | | | **Reference Range** | | | | |
| Sodium | | | 148 | | | | | 135 to 145 mEq/L | | | | |
| Potassium | | | 5.0 | | | | | 3.5 to 5.0 mEq/L | | | | |
| Glucose (fasting) | | | 72 | | | | | Normal < 99 mg/dL | | | | |
| BUN | | | 32 | | | | | 10-20 mg/dL | | | | |
| Creatinine (Serum) | | | 1.5 | | | | | 0.9 to 1.4 mg/dL | | | | |
| Hematocrit | | | 49 | | | | | Males: 42-52%; Females: 35-47% | | | | |
| WBC | | | 6.6 | | | | | 4.5 – 10.5 x 103 cells/mm3 | | | | |

The nurse reviews additional nursing notes and vital sign/flowsheet data.

* Drag 1 condition and 1 finding to fill in the blanks of the following sentence.

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The client is most likely experiencing as evidenced by the .

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| **Conditions** | **Findings** |
| Respiratory failure | Blood pressure |
| Rebound hypertension | Pulse oximeter findings |
| Acute depression | Changes in neurologic status \* |
| Delirium superimposed on dementia\* | Fluid volume status |
| Chronic kidney failure | Temperature |

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| **Scoring rule: Rationale**  Rationale: Persons with dementia/Alzheimer’s disease are at high risk for delirium when hospitalized, (in unfamiliar overly-stimulating environment) especially when experiencing dehydration/metabolic imbalance, etc. She is showing some early signs of delirium on Day 2 @ 1200—increasingly disoriented, inattentive, and anxious. |

**Case Study Question 4 of 6**

The nurse cares for a 72-year-old female admitted to the medical unit with dehydration and secondary diagnosis of mid-stage Alzheimer’s disease.

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| --- | --- | --- | --- |
| **Phase Sheet** | | | |
| Name | Theresa Peters | | | | | | | | | Gender | | F |
| Age | 72 | | | Weight (lbs/kg) | | 122 lb (55 kg) | | | | Allergies | | NKA |
| **Nurses’ Notes** | | | |
| **DAY 1 1800:** Client admitted from ED to medical unit for dehydration after several days of poor PO intake where she appeared to briefly lose consciousness this am after breakfast. Retired for several years as seamstress and husband passed away last year. Now lives with daughter/family due to recent diagnosis of middle stage Alzheimer’s disease, history of mild hypertension & gastroesophageal reflux. Daughter notes appetite has diminished in past 2-3 weeks and it is hard to get her to drink enough fluids even in the warmer weather. She has been more “down in the dumps” the past few weeks. Client has been unsteady on her feet due to dizziness and increasingly weak. P: 104 and B/P 102/62 (sitting) & 94/55 (standing). Skin & mucous membranes dry; tenting noted. Admission BUN & creatinine elevated. Foley inserted and draining concentrated amber urine. Provider notified; ordered fluid challenge of 500 ml normal saline. Alert/oriented to name only, answers questions, pleasant, cooperative, asking for daughter.  **2200:** B/P and P improved after saline bolus. U/O clear yellow and increased to 240 ml in past 4 hrs. Resting quietly, cooperative and no report of dizziness, etc.  **DAY 2 0800:** IV normal saline running at 75 ml/hr. B/P improved to 124/74 and negative for orthostatic changes. Lisinopril dose held this am. Am labs improved—BUN/creatinine WNL.  **1200:** VS stable. Not interested in lunch despite reminders to eat. IV normal saline @ 50 ml/hr. Foley draining adequate amts clear yellow urine. Seems more disoriented, anxious and inattentive.  **1500:** Client calling out from room, anxious and agitated, asking about needing to use bathroom and pulling at Foley catheter and IV. Seems easily distracted and suddenly hyperalert. States she “needs to leave so can get ready to go to work”; states she sees her boss outside waiting. Provider notified. | | | | | | | | | | | | |
| **Vital Signs** | | | |
| Time | | **1800** | | | **2200** | | **0800** | | **1200** | | **1500** | |
| T ◦F/ ◦C | | 97.8 F /36.5 C | | | 98 F / 36.6 C | | 97.8 F/36.5 C | | 98.2/36.7 C | | 97.8 F/36.5 C | |
| P | | 104 | | | 94 | | 86 | | 84 | | 98 | |
| RR | | 20 | | | 18 | | 16 | | 18 | | 26 | |
| B/P | | 102/62 | | | 110/68 | | 120/72 | | 130/76 | | 138/78 | |
| Pulse oximeter | | 97 | | | 97 | | 96 | | 97 | | 95 | |
| Oxygen | | Room air | | | Room air | | Room air | | Room air | | Room air | |
| **Laboratory Report** | | | |
| **Lab** | | | **Results @ 1400 (ED)** | | | | | **Reference Range** | | | | |
| Sodium | | | 148 | | | | | 135 to 145 mEq/L | | | | |
| Potassium | | | 5.0 | | | | | 3.5 to 5.0 mEq/L | | | | |
| Glucose (fasting) | | | 72 | | | | | Normal < 99 mg/dL | | | | |
| BUN | | | 32 | | | | | 10-20 mg/dL | | | | |
| Creatinine (Serum) | | | 1.5 | | | | | 0.9 to 1.4 mg/dL | | | | |
| Hematocrit | | | 49 | | | | | Males: 42-52%;Females: 35-47% | | | | |
| WBC | | | 6.6 | | | | | 4.5 – 10.5 x 103 cells/mm3 | | | | |

Using the Confusion Assessment Method instrument to assess for delirium, the client is determined to be experiencing delirium.

* Drag 1 outcome and 1 intervention to fill in the blanks of the following sentence.

To achieve the desired outcome the nurse should

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| Outcomes |  | Interventions |
| B/P and pulse stable |  | Frequent reorientation to time and place |
| Client no longer agitated and free of injury\* |  | Assess vital signs every 15 minutes |
| Urinary output adequate and clear |  | Use calming communication strategies\* |
| Oriented X 4 and can state current president |  | Assist OOB to chair and apply waist restraint |

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| **Scoring rule: Rationale**  Rationale: In acute delirium, the initial and primary outcome is reducing agitation and keeping client safe. In clients who are cognitively intact at baseline, being oriented X 4/state president is a realistic outcome but not in the case of a client with Alzheimer’s whose baseline orientation/short term memory is compromised as a baseline finding. As far as interventions, using calming communication strategies is of utmost priority. It is not helpful--and can be upsetting to the client with Alzheimer’s disease—to frequently re-orient a client and check vital signs unnecessarily/so frequently. Restraints are also contraindicated (can cause injury in agitated client with dementia). |

**Case Study Question 5 of 6**

The nurse cares for a 72-year-old female admitted to the medical unit with dehydration and secondary diagnosis of mid-stage Alzheimer’s disease.

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| --- | --- | --- |
| **Phase Sheet** | | |
| Name | Theresa Peters | | | | | | | | Gender | | F |
| Age | 72 | | Weight (lbs/kg) | | 122 lb (55 kg) | | | | Allergies | | NKA |
| **Nurses’ Notes** | | |
| **DAY 1 1800:** Client admitted from ED to medical unit for dehydration after several days of poor PO intake where she appeared to briefly lose consciousness this am after breakfast. Retired for several years as seamstress and husband passed away last year. Now lives with daughter/family due to recent diagnosis of middle stage Alzheimer’s disease, history of mild hypertension & gastroesophageal reflux. Daughter notes appetite has diminished in past 2-3 weeks and it is hard to get her to drink enough fluids even in the warmer weather. She has been more “down in the dumps” the past few weeks. Client has been unsteady on her feet due to dizziness and increasingly weak. P: 104 and B/P 102/62 (sitting) & 94/55 (standing). Skin & mucous membranes dry; tenting noted. Admission BUN & creatinine elevated. Foley inserted and draining concentrated amber urine. Provider notified; ordered fluid challenge of 500 ml normal saline. Alert/oriented to name only, answers questions, pleasant, cooperative, asking for daughter.  **2200:** B/P and P improved after saline bolus. U/O clear yellow and increased to 240 ml in past 4 hrs. Resting quietly, cooperative and no report of dizziness, etc.  **DAY 2 0800:** IV normal saline running at 75 ml/hr. B/P improved to 124/74 and negative for orthostatic changes. Lisinopril dose held this am. Am labs - BUN/creatinine and potassium WNL.  **1200:** VS stable. Not interested in lunch despite reminders to eat. IV normal saline @ 50 ml/hr. Foley draining adequate amts clear yellow urine. Seems more disoriented, anxious and inattentive.  **1500:** Client calling out from room, anxious and agitated, asking about needing to use bathroom and pulling at Foley catheter and IV. Seems easily distracted and suddenly hyperalert. States she “needs to leave so can get ready to go to work”; states she sees her boss outside waiting. Provider notified. | | | | | | | | | | | |
| **Vital Signs** | | |
| Time | | **1800** | | **2200** | | **0800** | | **1200** | | **1500** | |
| T ◦F/ ◦C | | 97.8 F /36.5 C | | 98 F / 36.6 C | | 97.8 F/36.5 C | | 98.2/36.7 C | | 97.8 F/36.5 C | |
| P | | 104 | | 94 | | 86 | | 84 | | 98 | |
| RR | | 20 | | 18 | | 16 | | 18 | | 26 | |
| B/P | | 102/62 | | 110/68 | | 120/72 | | 130/76 | | 138/78 | |
| Pulse oximeter | | 97 | | 97 | | 96 | | 97 | | 95 | |
| Oxygen | | Room air | | Room air | | Room air | | Room air | | Room air | |
| **Laboratory Report** | | |
| **Lab** | | | **Results @ 1400 (ED)** | | | | **Reference Range** | | | | |
| Sodium | | | 148 | | | | 135 to 145 mEq/L | | | | |
| Potassium | | | 5.0 | | | | 3.5 to 5 mEq/L | | | | |
| Glucose (fasting) | | | 72 | | | | Normal < 99 mg/dL | | | | |
| BUN | | | 32 | | | | 10-20 mg/dL | | | | |
| Creatinine (Serum) | | | 1.5 | | | | 0.9 to 1.4 mg/dL | | | | |
| Hematocrit | | | 49 | | | | Males: 42-52%;Females: 35-47% | | | | |
| WBC | | | 6.6 | | | | 4.5 – 10.5 x 103 cells/mm3 | | | | |

* For each possible action, click to specify if it is indicated or not indicated when caring for the client having an acute episode of delirium.

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| **Action** | **Indicated** | **Not indicated** |
| Obtain vital signs, updated Chem 8 and urine specimen | * X |  |
| Monitor pulse oximeter every 15-30 minutes |  | * X |
| Apply 4-point restraints |  | * X |
| Tell client you will help her get ready for work | * X |  |
| Ask provider for antipsychotic medication order stat |  | * X |
| Implement safety precautions | * X |  |
| Request order from provider to discontinue Foley catheter | * X |  |
| Apply protective skin sleeve to IV arm | * X |  |
| Request family presence | * X |  |

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| **Scoring rule: 0/1**  Rationale: Client is experiencing a hyperacute form of delirium. She is confused about being in hospital/living in past (thinks she is still working) and sees her boss outside waiting (perceptual disturbance/visual hallucination). While dementia refers to the symptoms of baseline chronic confusion (in this case, due to Alzheimer’s disease), delirium is an acute onset of confusion. It can be more difficult to identify when it is superimposed on baseline dementia symptoms. It is considered a medical emergency; labs/urine should be promptly obtained to identify any potential metabolic causes that can be corrected. Once calm, the nurse should promptly recheck vital signs and labs for metabolic causes and keep the client safe. Foley catheters are a major trigger for delirium and the nurse should contact the provider about continued need for such. The nurse can also provide a protective sleeve to the IV arm in meantime and ask family a member to be with the client. It is contraindicated unless in a major agitated state to apply 4-point restraints and give antipsychotic medication. The nurse should try calming strategies and validate the client’s feelings/concerns about getting to work (enter her world). There is no indication to monitor pulse oximeter frequently and this could further upset the client. |

**Case Study Question 6 of 6**

The nurse cares for a 72-year-old female admitted to the medical unit with dehydration and secondary diagnosis of mid-stage Alzheimer’s disease.

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| --- | --- | --- |
| **Phase Sheet** | | |
| Name | Theresa Peters | | | | | | | | Gender | | F |
| Age | 72 | | Weight (lbs/kg) | | 122 lb (55 kg) | | | | Allergies | | NKA |
| **Nurses’ Notes** | | |
| **1800:** Client admitted from ED to medical unit for dehydration after several days of poor PO intake where she appeared to briefly lose consciousness this am after breakfast. Retired for several years as seamstress and husband passed away last year. Now lives with daughter/family due to recent diagnosis of middle stage Alzheimer’s disease, history of mild hypertension & gastroesophageal reflux. Daughter notes appetite has diminished in past 2-3 weeks, and it is hard to get her to drink enough fluids even in the warmer weather. She has been more “down in the dumps” the past few weeks. Client has been unsteady on her feet due to dizziness and increasingly weak. P: 104 and B/P 102/62 (sitting) & 94/55 (standing). Skin & mucous membranes dry; tenting noted. Admission BUN & creatinine elevated. Foley inserted and draining concentrated amber urine. Provider notified; ordered fluid challenge of 500 ml normal saline. Alert/oriented to name only, answers questions, pleasant, cooperative, asking for daughter.  **2200:** B/P and P improved after saline bolus. U/O clear yellow and increased to 240 ml in past 4 hrs. Resting quietly, cooperative and no report of dizziness, etc.  **DAY 2 0800:** IV normal saline running at 75 ml/hr. B/P improved to 124/74 and negative for orthostatic changes. Lisinopril dose held this am. Am labs - BUN/creatinine WNL.  **1200:** VS stable. Not interested in lunch despite reminders to eat. IV normal saline @ 50 ml/hr. Foley draining adequate amts clear yellow urine. Seems more disoriented, anxious and inattentive.  **1500:** Client calling out from room, anxious and agitated, asking about needing to use bathroom and pulling at Foley catheter and IV. Seems easily distracted and suddenly hyperalert. States she “needs to leave so can get ready to go to work”; states she sees her boss outside waiting. Provider notified.  **1530:** Client reassured she will get to work on time; sitting calmly in bedside chair. VS stable. Metabolic panel and urine sent to lab. Daughter called to come in to be with client. | | | | | | | | | | | |
| **Vital Signs** | | |
| Time | | **1800** | | **2200** | | **0800** | | **1200** | | **1500** | |
| T ◦F/ ◦C | | 97.8 F /36.5 C | | 98 F / 36.6 C | | 97.8 F/36.5 C | | 98.2/36.7 C | | 97.8 F/36.5 C | |
| P | | 104 | | 94 | | 86 | | 84 | | 98 | |
| RR | | 20 | | 18 | | 16 | | 18 | | 26 | |
| B/P | | 102/62 | | 110/68 | | 120/72 | | 130/76 | | 138/78 | |
| Pulse oximeter | | 97 | | 97 | | 96 | | 97 | | 95 | |
| Oxygen | | Room air | | Room air | | Room air | | Room air | | Room air | |
| **Laboratory Report** | | |
| **Lab** | | | **Results @ 1000 (ED)** | | | | **Reference Range** | | | | |
| Sodium | | | 148 | | | | 135 to 145 mEq/L | | | | |
| Potassium | | | 5.0 | | | | 3.5 to 5.0 mEq/L | | | | |
| Glucose (fasting) | | | 72 | | | | Normal < 99 mg/dL | | | | |
| BUN | | | 32 | | | | 10-20 mg/dL | | | | |
| Creatinine (Serum) | | | 1.5 | | | | 0.9 to 1.4 mg/dL | | | | |
| Hematocrit | | | 49 | | | | Males: 42-52%;Females: 35-47% | | | | |
| WBC | | | 6.6 | | | | 4.5 – 10.5 x 103 cells/mm3 | | | | |

The nurse has called the provider and continues to observe the client, checking vital signs and labs.

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

|  |  |
| --- | --- |
| The nurse determines the client’s status is | Select |
| Improving\* |
| Deteriorating |
| Unchanged |
| The nurse should now | Select  Continue to assess vital signs every 30 minutes  Reorient the client to person/place/time every hr  Discuss discharge timeline with provider\* |

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| **Scoring rule: 0/1**  Rationale: The client is improving as vital signs are stable, the Chem 8 is WNL and client is more calm, safely sitting in chair with supervision (vs. restraints). Physically the client is recovered from dehydration. Being in the hospital (vs. familiar home surroundings) is most likely another trigger for this client with Alzheimer’s, so if stable, is appropriate to discuss discharge with provider. |

**Trend**

The nurse cares for a 72-yr-old female admitted to the medical unit with dehydration and secondary diagnosis of mid-stage Alzheimer’s disease.

|  |  |  |
| --- | --- | --- |
| **Phase Sheet** | | |
| Name | Theresa Peters | | | | | | | | Gender | | F |
| Age | 72 | | Weight (lbs/kg) | | 122 lb (55 kg) | | | | Allergies | | NKA |
| **Nurses’ Notes** | | |
| **DAY 1 1800:** Client admitted from ED to medical unit for dehydration after several days of poor PO intake where she appeared to briefly lose consciousness this am after breakfast. Retired for several years as seamstress and husband passed away last year. Now lives with daughter/family due to recent diagnosis of middle stage Alzheimer’s disease, history of mild hypertension & gastroesophageal reflux. Daughter notes appetite has diminished in past 2-3 weeks, and it is hard to get her to drink enough fluids even in the warmer weather. She has been more “down in the dumps” the past few weeks. Client has been unsteady on her feet due to dizziness and increasingly weak. P: 104 and B/P 102/62 (sitting) & 94/55 (standing). Skin & mucous membranes dry; tenting noted. Admission BUN & creatinine elevated. Foley inserted and draining concentrated amber urine. Provider notified; ordered fluid challenge of 500 ml normal saline. Alert/oriented to name only, answers questions, pleasant, cooperative, asking for daughter.  **2200:** B/P and P improved after saline bolus. U/O clear yellow and increased to 240 ml in past 4 hrs. Resting quietly, cooperative and no report of dizziness, etc.  **DAY 2 0800:** IV normal saline running at 75 ml/hr. B/P improved to 124/74 and negative for orthostatic changes. Lisinopril dose held this am. Am labs - BUN/creatinine and potassium WNL.  **1200:** VS stable. Not interested in lunch despite reminders to eat. IV normal saline @ 50 ml/hr. Foley draining adequate amts clear yellow urine. Seems more disoriented, anxious and inattentive.  **1500:** Client calling out from room, anxious and agitated, asking about needing to use bathroom and pulling at Foley catheter and IV. Seems easily distracted and suddenly hyperalert. States she “needs to leave so can get ready to go to work”; states she sees her boss outside waiting. Provider notified.  **1530:** Client reassured she will get to work on time; sitting calmly in bedside chair. VS stable. Metabolic panel and urine sent to lab. Daughter called to come in to be with client. | | | | | | | | | | | |
| **Vital Signs** | | |
| Time | | **1800** | | **2200** | | **0800** | | **1200** | | **1500** | |
| T ◦F/ ◦C | | 97.8 F /36.5 C | | 98 F / 36.6 C | | 97.8 F/36.5 C | | 98.2/36.7 C | | 97.8 F/36.5 C | |
| P | | 104 | | 94 | | 86 | | 84 | | 98 | |
| RR | | 20 | | 18 | | 16 | | 18 | | 26 | |
| B/P | | 102/62 | | 110/68 | | 120/72 | | 130/76 | | 138/78 | |
| Pulse oximeter | | 97 | | 97 | | 96 | | 97 | | 95 | |
| Oxygen | | Room air | | Room air | | Room air | | Room air | | Room air | |
| **Laboratory Report** | | |
| **Lab** | | | **Results @ 1400 (ED)** | | | | **Reference Range** | | | | |
| Sodium | | | 148 | | | | 135 to 145 mEq/L | | | | |
| Potassium | | | 5.0 | | | | 3.5 to 5.0 mEq/L | | | | |
| Glucose (fasting) | | | 72 | | | | Normal < 99 mg/dL | | | | |
| BUN | | | 32 | | | | 10-20 mg/dL | | | | |
| Creatinine (Serum) | | | 1.5 | | | | 0.9 to 1.4 mg/dL | | | | |
| Hematocrit | | | 49 | | | | Males: 42-52%;Females: 35-47% | | | | |
| WBC | | | 6.6 | | | | 4.5 – 10.5 x 103 cells/mm3 | | | | |

* For each finding, click to indicate if the finding is consistent with (or causative factor of) dehydration, Alzheimer’s disease, or delirium. Each finding may support more than one condition. Each column must have at least 1 finding.

|  |  |  |  |
| --- | --- | --- | --- |
| **Findings** | **Dehydration** | **Alzheimer’s disease** | **Delirium** |
| BUN & creatinine | * X |  | * X |
| Decreased urine output | * X |  |  |
| Sodium | * X |  | * X |
| Potassium | * X |  | * X |
| Chronic confusion |  | * X |  |
| Fluctuating level of consciousness |  |  | * X |
| Orthostatic hypotension | * X |  |  |

|  |
| --- |
| **Scoring rule: 0/1**  Rationale: Rising levels of BUN/creatinine and sodium/potassium are both linked to dehydration and consequently, a metabolic trigger for delirium. Decreased urine output is more directly linked to dehydration. Orthostatic hypotension can be a symptom of dehydration/fluid volume deficit. Chronic confusion is a sign of Alzheimer’s disease/dementia but fluctuating LOC and perceptual disturbances/hallucinations are indicative of delirium. Persons with dementia are generally in steady state of alertness until very late in the illness, or, if experiencing delirium superimposed on dementia. |