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| **Maryland Next Gen NCLEX Test Bank Project**  **September 1, 2022** | | | |
| **Case Study Topic**: | Prostate cancer with Prostatectomy | **Author:** | **Tara Sohrabi**  **Nursing Professor**  **Montgomery College** |

**Case Summary:**

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| A 55-year-old client is admitted to the surgical unit after a robotic assisted laparoscopic prostatectomy for early-stage prostate cancer. The client has a foley catheter in place with clear, red-colored drainage. The client has signs of hemorrhagic shock, and the nurse takes action and evaluates outcomes of care. |

**Objectives:**

|  |  |
| --- | --- |
| 1. Recognize signs and symptoms of hemorrhagic shock. 2. Choose appropriate interventions for hemorrhagic shock. 3. Evaluate outcomes of care. | |
| <https://umaryland.az1.qualtrics.com/jfe/form/SV_5yzzhAvwDcIc31Y> |  |
| **Bow-tie** | **Bow-tie QR Code** |
| <https://umaryland.az1.qualtrics.com/jfe/form/SV_0wkHVeggkYdGlAq> |  |

**Case References**

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| 1. Hinkle, J., Cheever, K. (2022). *Brunner and Suddath’s Textbook of Medical-Surgical Nursing*15th ed. Philadelphia: Lippincott, Williams, and Wilkins. |

**Case Study Question 1 of 6**

A 55-year-old client is admitted to the surgical unit after robotic-assisted laparoscopic radical prostatectomy for early-stage prostate cancer.

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| --- | --- |
| **Nurses’ Notes** | |
| 1315: Client was transferred from postoperative care unit to the surgical unit after a robotic assisted laparoscopic prostatectomy for early-stage prostate cancer. Client is alert and oriented X4. Vital signs are normal, has six small incisions in the abdomen with 4*×*4 dressings with clear dressing dry and intact. The client has an indwelling urinary catheter with continuous bladder irrigation draining clear, red-colored urine.  1330: Client’s dressings are dry and intact, the foley catheter draining red urine. Irrigation rate increased.  1345: Dressings are dry and intact. Administered ketorolac 30 mg IV push, and urine color is slightly red.  1415: Pain is decreased, but client is slightly confused. The client’s urine color is bright red. | | | | | | |
| **Vital Signs** | |
| Time | 1315 | | 1330 | 1345 | 1415 |
| Temp | 99.4F/37.4C | | 99.4 F/37.4C | 99.2 F/37.3C | 99.2 F/37.3C |
| P | 85 | | 88 | 102 | 124 |
| RR | 16 | | 16 | 20 | 20 |
| B/P | 145/73 | | 130/73 | 110/70 | 95/53 |
| Pulse oximeter | 96% | | 96% | 94% | 90% |
| Oxygen | Room air | | Room air | Room air | Room air |
| Pain | 3/10 | | 3/10 | 6/10 | 2/10 |

* Which findings require immediate follow-up? Select all that apply.
* Mental status \*
* Heart rate \*
* Temperature
* Blood pressure\*
* Respiratory rate
* Pain
* Pulse oximetry\*
* Urine\*

**Scoring Rule: +/-**

Rationale: The trends in the heart rate, blood pressure, and pulse oximeter reading are consistent with hypovolemia and the confusion may be a symptom of of poor cerebral perfusions. The urine was only slightly red but is now once again bright red suggesting the bleeding is getting worse.

**Case Study Question 2 of 6**

A 55-year-old client is admitted to the surgical unit after robotic-assisted laparoscopic radical prostatectomy for early-stage prostate cancer.

|  |  |
| --- | --- |
| **Nurses’ Notes** | |
| 1315: Client was transferred from postoperative care unit to the surgical unit after a robotic assisted laparoscopic prostatectomy for early-stage prostate cancer. Client is alert and oriented X4. Vital signs are normal, has six small incisions in the abdomen with 4*×*4 dressings with clear dressing dry and intact. The client has an indwelling urinary catheter with continuous bladder irrigation draining clear, red-colored urine.  1330: Client’s dressings are dry and intact, the foley catheter draining red urine. Irrigation rate increased.  1345: Dressings are dry and intact. Administered ketorolac 30 mg IV push, and urine color is slightly red.  1415: Pain is decreased, but client is slightly confused. The client’s urine color is bright red. | | | | | | |
| **Vital Signs** | |
| Time | 1315 | | 1330 | 1345 | 1415 |
| Temp | 99.4F/37.4C | | 99.4 F/37.4C | 99.2 F/37.3C | 99.2 F/37.3C |
| P | 85 | | 88 | 102 | 124 |
| RR | 16 | | 16 | 20 | 20 |
| B/P | 145/73 | | 130/73 | 110/70 | 95/53 |
| Pulse oximeter | 96% | | 96% | 94% | 90% |
| Oxygen | Room air | | Room air | Room air | Room air |
| Pain | 3/10 | | 3/10 | 6/10 | 2/10 |

* For each finding click to specify if the finding is consistent with the complication of hemorrhagic shock, fluid overload, or pulmonary embolism. Each finding may support more than one disease process. Each column must have at least one correct response.

|  |  |  |  |
| --- | --- | --- | --- |
| findings | Hemorrhagic shock | Fluid overload | Pulmonary embolism |
| Confusion | * \* |  | * \* |
| Rapid heart rate | * \* |  | * \* |
| Low blood pressure | * \* |  | * \* |
| Low pulse oximeter | * \* | * \* | * \* |
| Bright red urine | * \* |  |  |

**Scoring Rule: +/-**

**Rationale:** All three post-op complications can cause low oxygenation. The nurse recognizes signs pulmonary embolism and hemorrhagic shock manifest as mental changes, tachycardia, and hypotension, and low blood pressure. The red urine indicates active bleeding and is associated with hemorrhagic shock.

**Study Question 3 of 6**

A 55-year-old client is admitted to the surgical unit after robotic-assisted laparoscopic radical prostatectomy for early-stage prostate cancer.

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| --- | --- |
| **Nurses’ Notes** | |
| 1315: Client was transferred from postoperative care unit to the surgical unit after a robotic assisted laparoscopic prostatectomy for early-stage prostate cancer. Client is alert and oriented X4. Vital signs are normal, has six small incisions in the abdomen with 4*×*4 dressings with clear dressing dry and intact. The client has an indwelling urinary catheter with continuous bladder irrigation draining clear, red-colored urine.  1330: Client’s dressings are dry and intact, the foley catheter draining red urine. Irrigation rate increased.  1345: Dressings are dry and intact. Administered ketorolac 30 mg IV push, and urine color is slightly red.  1415: Pain is decreased, but client is slightly confused. The client’s urine color is bright red. | | | | | | |
| **Vital Signs** | |
| Time | 1315 | | 1330 | 1345 | 1415 |
| Temp | 99.4F/37.4C | | 99.4 F/37.4C | 99.2 F/37.3C | 99.2 F/37.3C |
| P | 85 | | 88 | 102 | 124 |
| RR | 16 | | 16 | 20 | 20 |
| B/P | 145/73 | | 130/73 | 110/70 | 95/53 |
| Pulse oximeter | 96% | | 96% | 94% | 90% |
| Oxygen | Room air | | Room air | Room air | Room air |
| Pain | 3/10 | | 3/10 | 6/10 | 2/10 |

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

|  |  |
| --- | --- |
| The client is most likely experiencing | Select |
| fluid overload |
| hemorrhagic shock |
| pulmonary embolism |
| as evidenced by the | Select |
| cardiovascular assessment |
| respiratory assessment |
| neurologic assessment |

**Scoring Rule: Rationale**

**Rationale:** The client is experiencing hemorrhagic shock as most evidenced by low blood pressure, tachycardia, and active bleeding in the urine.

**Case Study Question 4 of 6**

A 55-year-old client is admitted to the surgical unit after robotic-assisted laparoscopic radical prostatectomy for early-stage prostate cancer.

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| **Nurses’ Notes** | |
| 1315: Client was transferred from postoperative care unit to the surgical unit after a robotic assisted laparoscopic prostatectomy for early-stage prostate cancer. Client is alert and oriented X 4. Vital signs are normal, has six small incisions in the abdomen with 4*×*4 dressings with clear dressing dry and intact. The client has an indwelling urinary catheter with continuous bladder irrigation draining clear, red-colored urine.  1330: Client’s dressings are dry and intact, the foley catheter draining red urine. Irrigation rate increased.  1345: Dressings are dry and intact. Administered ketorolac 30 mg IV push, and urine color is slightly red.  1415: Pain is decreased, but client is slightly confused. The client’s urine color is bright red.  1420: Provider notified of change in client status. | | | | | | |
| **Vital Signs** | |
| Time | 1315 | | 1330 | 1345 | 1415 |
| Temp | 99.4F/37.4C | | 99.4 F/37.4C | 99.2 F/37.3C | 99.2 F/37.3C |
| P | 85 | | 88 | 102 | 124 |
| RR | 16 | | 16 | 20 | 20 |
| B/P | 145/73 | | 130/73 | 110/70 | 95/53 |
| Pulse oximeter | 96% | | 96% | 94% | 90% |
| Oxygen | Room air | | Room air | Room air | Room air |
| Pain | 3/10 | | 3/10 | 6/10 | 2/10 |

The nurse suspects the client is experiencing hemorrhagic shock and notifies the provider.

* For each potential intervention, click to specify whether the intervention is not appropriate or not appropriate to include in the plan of care for a client who is experiencing hemorrhagic shock after prostatectomy.

|  |  |  |
| --- | --- | --- |
| Potential Intervention | Appropriate | Not appropriate |
| Obtaining a hemoglobin and hematocrit | * \* |  |
| Removing the foley catheter |  | * \* |
| Administering a fluid bolus | * \* |  |
| Obtaining a urine culture |  | * \* |
| Administering an enema |  | * \* |
| Assesses urine output hourly | * \* |  |
| Applying oxygen | * \* |  |

**Scoring Rule: 0/1**

**Rationale:** The catheter should remain in place and the provider should apply traction to the catheter to put pressure on the sites that may be bleeding. The nurse should implement measures to restore perfusion which include applying oxygen and giving a fluid bolus. Hemoglobin and hematocrit levels should be drawn to help determine if blood is needed. Urine output should continue to be monitored closely to ensure the urethra is patent, and renal perfusion is adequate. Urine cultures are unlikely to be helpful at this since infection is not suspected and the urine is bloody. Edemas are contraindicated as they may injure the prostatic fossa.

**Case Study Question 5 of 6**

55-year-old client is admitted to the surgical unit after robotic-assisted laparoscopic radical prostatectomy for early-stage prostate cancer.

|  |  |
| --- | --- |
| **Nurses’ Notes** | |
| 1315: Client was transferred from postoperative care unit to the surgical unit after a robotic assisted laparoscopic prostatectomy for early-stage prostate cancer. Client is alert and oriented X4. Vital signs are normal, has six small incisions in the abdomen with 4*×*4 dressings with clear dressing dry and intact. The client has an indwelling urinary catheter with continuous bladder irrigation draining clear, red-colored urine.  1330: Client’s dressings are dry and intact, the foley catheter draining red urine. Irrigation rate increased.  1345: Dressings are dry and intact. Administered ketorolac 30 mg IV push, and urine color is slightly red.  1415: Pain is decreased, but client is slightly confused. The client’s urine color is bright red.  1420: Provider notified of change in client status. | | | | | | |
| **Vital Signs** | |
| Time | 1315 | | 1330 | 1345 | 1415 |
| Temp | 99.4F/37.4C | | 99.4 F/37.4C | 99.2 F/37.3C | 99.2 F/37.3C |
| P | 85 | | 88 | 102 | 124 |
| RR | 16 | | 16 | 20 | 20 |
| B/P | 145/73 | | 130/73 | 110/70 | 95/53 |
| Pulse oximeter | 96% | | 96% | 94% | 90% |
| Oxygen | Room air | | Room air | Room air | Room air |
| Pain | 3/10 | | 3/10 | 6/10 | 2/10 |

The physician assesses the client and applies traction to the catheter and writes orders.

* Click to highlight 2 additional orders the nurse should implement immediately to manage hemorrhagic shock.

|  |
| --- |
| **Orders** |
| * Maintain traction to catheter * Continuous bladder irrigation titrate to keep urine pink to clear * Administer 500mL 0.9% NS IV bolus * Administer oxygen to keep O2 sat above 94% * Obtain blood for Hg and Hct * Notify primary care provider (PCP) promptly with lab results * Administer blood component if client’s Hg is <7 g/dL | |

|  |
| --- |
| **Orders** |
| * Maintain traction to catheter * Continuous bladder irrigation titrate to keep urine pink to clear * Administer 500mL 0.9% NS IV bolus * Administer oxygen to keep O2 sat above 94% * Obtain blood for Hg and Hct * Notify primary care provider (PCP) promptly with lab results * Administer blood component if client’s Hg is <7 g/dL | |

**Scoring Rule: +/-**

**Rationale:** The nurse should administer IV fluid bolus to manage the hypovolemia and administer oxygen to improve perfusion immediately.

**Case Study Question 6 of 6**

A 55-year-old client is admitted to the surgical unit after robotic-assisted laparoscopic radical prostatectomy for early-stage prostate cancer.

|  |  |  |
| --- | --- | --- |
| **Nurses’ Notes** | | |
| 1315: Client was transferred from postoperative care unit to the surgical unit after a robotic assisted laparoscopic prostatectomy for early-stage prostate cancer. Client is alert and oriented X4. Vital signs are normal, has six small incisions in the abdomen with 4*×*4 dressings with clear dressing dry and intact. The client has an indwelling urinary catheter with continuous bladder irrigation draining clear, red-colored urine.  1330: Client’s dressings are dry and intact, the foley catheter draining red urine. Irrigation rate increased.  1345: Dressings are dry and intact. Administered ketorolac 30 mg IV push, and urine color is slightly red.  1415: Pain is decreased, but client is slightly confused. The client’s urine color is bright red.  1420: Provider notified of change in client status.  1445: Provider retaped catheter to client’s leg. Oxygen given and fluid bolus given. Urine light pink. | | | | | | | | |
| **Vital Signs** | | |
| Time | 1315 | | | 1330 | 1345 | | 1415 | 1445 |
| Temp | 99.4F/37.4C | | | 99.4 F/37.4C | 99.2 F/37.3C | | 99.2 F/37.3C | 98.2 F/36.7C |
| P | 85 | | | 88 | 102 | | 124 | 100 |
| RR | 16 | | | 16 | 14 | | 14 | 16 |
| B/P | 145/73 | | | 130/73 | 110/70 | | 95/53 | 110/55 |
| Pulse oximeter | 96% | | | 96% | 94% | | 90% | 96% |
| Oxygen | Room air | | | Room air | Room air | | Room air | 2 L |
| Pain | 3/10 | | | 3/10 | 6/10 | | 2/10 | 2/10 |
| **Orders** | | |
| * Maintain traction to catheter * Continuous bladder irrigation titrate to keep urine pink to clear * Administer 500mL 0.9% NS IV bolus * Administer oxygen to keep O2 sat above 94% * Obtain blood for Hg and Hct * Notify primary care provider (PCP) promptly with lab results * Administer blood component if client’s Hg is <7 g/dL | | | | | | | | |
| **Laboratory Report** | | |
| Hematocrit | | 32% | | | | Males: 42-52%; Females: 35-47% | | |
| Hemoglobin | | 10g/dL | | | | Males: 13-18 g/dL; Females:12-16 g/dL | | |

At 1445 the nurse reassessed the client’s vital signs and reviews the 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 |
| modify the plan of care |
| continue monitoring the client vital signs\* |
| prepare patient for discharge |

**Scoring Rule: 0/1**

**Rationale:** The client’s vital signs improving, and the nurse should continue monitoring the client vital signs. The nurse doesn’t need to modify the plan since the current plan of care meets the outcome. It is to soon to prepare the client for discharge. The discharge plan begins at the time of admission but the client’s condition has deteriorated and needs to be monitored for a longer period of time.

**Bowtie**

A 55-year-old client is admitted to the surgical unit after robotic-assisted laparoscopic radical prostatectomy for early-stage prostate cancer.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1315: Client was transferred from postoperative care unit to the surgical unit after a robotic assisted laparoscopic prostatectomy for early-stage prostate cancer. Client is alert and oriented X4. Vital signs are normal, has six small incisions in the abdomen with 4*×*4 dressings with clear dressing dry and intact. The client has an indwelling urinary catheter with continuous bladder irrigation draining clear, red-colored urine.  1330: Client’s dressings are dry and intact, the foley catheter draining red urine. Irrigation rate increased.  1345: Dressings are dry and intact. Administered ketorolac 30 mg IV push, and urine color is slightly red.  1415: Pain is decreased, but client is slightly confused. The client’s urine color is bright red. | | | | | | | | |
| **Vital Signs** | | |
| Time | 1315 | | | 1330 | 1345 | | 1415 |
| Temp | 99.4F/37.4C | | | 99.4 F/37.4C | 99.2 F/37.3C | | 99.2 F/37.3C |
| P | 85 | | | 88 | 102 | | 124 |
| RR | 16 | | | 16 | 20 | | 24 |
| B/P | 145/73 | | | 130/73 | 110/70 | | 95/53 |
| Pulse oximeter | 96% | | | 96% | 94% | | 90% |
| Oxygen | Room air | | | Room air | Room air | | Room air |
| Pain | 3/10 | | | 3/10 | 6/10 | | 2/10 |
| **Laboratory Report** | | |
| Hematocrit | | 32% | | | | Males: 42-52%; Females: 35-47% | | |
| Hemoglobin | | 10g/dL | | | | Males: 13-18 g/dL; Females:12-16 g/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** |
| Administer Oxygen\* | Sepsis | Blood pressure\* |
| Administer antibiotics | Atelectasis | Urine\* |
| Encourage incentive spirometry | Hemorrhagic shock\* | WBC count |
| Administer IV fluid bolus\* | Pulmonary embolism | Breath sounds |
| Obtain a chest-Xray |  | Temperature |

**Scoring Rule: 0/1**

**Rationale:** The trends in the heart rate, blood pressure, and pulse oximeter reading are consistent with shock and the confusion may be a symptom of of poor cerebral perfusions. The urine was only slightly red but is now once again bright red suggesting the bleeding is getting worse. The client needs oxygen and a fluid bolus to improve perfusion. Urine and the blood pressure should be monitored for resolution of the hypotension and bleeding.