Case Study: Postoperative Nursing Management

Oxygenation, GI, GU, PATIENT SAFETY

1. Rita Schmidt, 74 years of age, is a female patient who was admitted to the surgical unit after undergoing removal of a section of the colon for colorectal cancer. The patient has a colostomy on her left (descending colon) abdomen. The patient has several small abdominal incisions and a clear dressing over each site. The incisions are well approximated and the staples are dry and intact. There is a Jackson--Pratt drain intact with minimal serous sanguineous drainage present. The colostomy is not functioning at this time. The patient has a Salem sump tube connected to low continuous wall suction that is draining a small amount of brown liquid. The patient has no bowel sounds. The Foley catheter has a small amount of dark amber-colored urine without sediments. The patient has sequential compression device (SCD) in place. The nurse performs an assessment and notes that the patient's breath sounds are decreased bilaterally in the bases and the patient has inspiratory crackles. The patient's cardiac assessment is within normal limits. The patient is receiving O_2 at 2 L per nasal cannula with a pulse oximetry reading of 95%. The vital signs include: blood pressure, 100/50 mm Hg; heart rate, 110 bpm; respiratory rate, 16 breaths/min; and the patient is afebrile. The patient is confused as to place and time.

After receiving report on this patient, what are the two most significant nursing priorities? (4 POINTS)

The two most significant nursing priority are ensuring the patient's blood pressure is brought to normal because she has a very low diastolic blood pressure .This happens in isolated diastolic hypotension. This indicates the patient has decreased blood supply to heart muscles which has lead to increased heart rate and confusion in this patient. This can risk the patient for heart failure. Also, her decreased breath sounds and inspiratory crackles signals problems associated with the lungs too. This can also be a sign for any fluid, or pneumothorax. Also, the safety of the patient is priority, making sure she is oriented is every aspect: including time, person, place and medical procedures.

What is missing from this report and needs to be known and addressed? (4 POINTS)

Any history of allergies, any history of any metabolic disease, medicines and the time the colostomy should be functional. The doctor's orders, such as medication and more.

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As well as, the intake and output of the patient because we need to know the fluid balance in the body post operation. Also, the renal function in clearing the toxins from the body and the fluid drainage quantity from the JP drain to know the healing process. Any residual fluid, or suction done from Salem sump tube to know the function of the gastrointestinal tract.

Perform a complete assessment addressing each system. Under ASSESSMENT for each system list the findings in the case study (both normal & abnormal). Under CRITICAL THINKING list (1) factors which may be contributing to the findings in ASSESSMENT (2) your interpretation of what these findings mean is happening physiologically (3) nursing interventions (independent or dependent) you want to implement as a result of (1) & (2) (28 POINTS/4 FOR EACH SYSTEM)

SYSTEM	ASSESSMENT	CRITICAL THINKING
Neuro	Disoriented to place and time.	Disorientation to place and time can be due to postoperative sedation effect, or pain killers effect .
Resp	Respiratory rate are 16 breaths per minute. SpO2is 95% on 2L nasal cannula Breath sounds - Air entry decreased bilaterally in bases and presence of inspiratory crackles.	Abdominal distention could have led to lower lobe lung Atlectasis ,which made the air-entry diminished. Presence of inspiratory crackles secondary to the Atlectasis. Crackles and lower lobe Atlectasis lead to oxygen requirement and desaturation.
Cardiac	Heart rate is 110bts/mt Blood pressure is 100/50 mmHg Heart sounds are Normal	Mild tachycardia with borderline blood pressure reveals the patient in mild hypovolemia secondary to fluid loss or bleeding inside abdomen.

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GI	Colostomy is not functioning Bowel sounds are absent Oral intake is npo status Nasogastric drain-brown colored small amount fluid via salem sump tube. Jackson--Pratt drain, serosanguineous drainage and minimum amount	Absence of bowel sounds could indicate bowel ischemia.
GU	Urine is via folleys catheter Urine color is dark amber, output isoliguric and is without sediments	Concentrated small amount of urine shows the need of fluids secondary to fluid loss in abdomen postoperatively.
Integumentary	Surgical wound is present, dry and intact	Clear wounds suggest normal findings.
Pain	Pain level is 8/10	Due to surgery and to morphine dose, patient may not be aroused at time.

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-Factors which may be contributing to the findings in assessment include, post operative patient, abnormal changes, and geriatric patient.

-Interpretation due to respiratory problems related to old age and ventilation during surgery, dehydration (dark amber colored urine) due to decreased intake of fluids because of nil per oral, urinary problem due to decreased intake of fluid, colorectal serous sanginous drinage due to acute inflammatory change, absences of bowel sounds due to npo and less physical movement due to surgery. Integumentary system;incisions due to surgery. Her pain is 8/10 due to surgery.

-Nursing interventions include assessing for hydration status, clearing airway secretion, oxygen supplement, providing comfortable position. For dehydration, I would encourage fluid intake if allowed ,fluid administration as per orders. Skin care to reduce dehydration and for urinary problem, I would do catheter care, and fluid adminstration. For the acute inflammatory changes, I would provide personal hygiene, assess temperature continuously, administer antibiotics regularly, docolostamy care, do care of naso gatric tube, and care of urine catheter. For bowel problems, I would encourage for physical movements, adviced to take liquids and encourage for simple movement. I would provide orientation and allow family members for visit. When doing colostomy care I will perform hand hygiene, introduce myself, apply PPE, provided client privacy and safety, assist patient to a comfortable sitting, or lying position. For pain management, I will assess level of pain 8/10, provide comfortable position. I would apply a cold application to reduce temperature, give antipyretics (paracetamol) and antibiotics according to the doctor's order.

What gerontologic postoperative assessments should the nurse note and why? *Example: Teaching colostomy care- patient may need support* (4 POINTS)

The gerontological postoperative assessments that should be done is a nutritional assessment, teaching the patient about dietary modifications, nutritional deficiency and identifying the deficiency. Eduacting the patient about malnutrition. Also, educate patient on medication uses, actions and side effects and advising them to report in case of adverse events. Lifestyle modification to encourage an active lifestyle with exercise and dressing to teach about the colostomy cleaning technique and how to change the bag.

After four hours under your care, the patient develops a fever of 99.9F and is difficult to arouse. You were able to get a doctor's order for an IV of LR to run at 50ml/hr. Urine output is improving and the Foley is draining 40ml/hr. Lung sounds unchanged and pulse ox is 92%. RR 14 and BP 110/60, HR 90. O2 at 2L NC intact. The colostomy is not functioning and there are no bowel sounds.

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Incision site clean and dry. Jackson Pratt intact draining a small amount of fluid. You assessed her abdominal pain at an 8/10 and administered 2mg morphine sulfate IVP 30 minutes ago. What is the next nursing action? (8 POINTS)

- Monitor respiration and circulation status frequently when given morphine. Morphine can cause respiratory depression and severe hypotension.
- Monitor the abdominal pain and tenderness.
- If colostomy is not working after surgery of 4-6 hrs and patient having pain, cramps or nausea, then the intestine could be obstructed. Inform doctor about it, check for sign of swelling, asses the drainage.
- Ausculate bowel sounds is recommended before starting oral diet and fluid.
- Assess the Jackson Pratt drain, if drainage is less than 30 mL in 24 hrs, the drain can be removed.
- Assess for any sign of infection such as: redness, swelling or pain.
- Assess neurological status and inform provider.
- Administer antipyretics as per ordered to to reduce body temperature.

How would you assess bowel sounds for this patient? (2 POINTS)

The bowel sounds can be assessed when bladder is empty. I will assess the 4 quadrants with the diagphram of the stethoscope. I will start at the right lower quadrant and work my way clockwise. Finally, I will asculate for vascular sounds using the bell of the stethoscope. If I can't hear any bowel sounds, I need to listen for 5 minutes.

How would you assess, measure and apply the wafer on the new colostomy? (10 POINTS)

I would take off the prior pouch discard of it and clean the stoma. Then I will clean the patient's stoma and make sure that it is completely dry. I will assess the stoma for any redness, tenderness, infections, or necrosis. Once, I finish assessing the stoma, I will measure the stoma with a measuring card in order to cut the wafer the right size, the right size for the wafer would be an 1/8 inch ring around the stoma. Once I cut the wafer I will smoothe down the edges of the wafer to make sure it sticks and it doesn't irriate the patient's skin. Then I will apply the pouch to the patient's skin and ask the patient which way they would like the pouch bag positioned. Lastly, I will inform the patient that sometimes they might have to do "burping the bag," meaning they will have to release the gas that builts up in the bag.

After 8 hours on your unit, Ms. Schmidt is attempting to get out of bed and speaking about random things with an inability to focus on your questions. Her skin is hot, RR is 32, pulse is 102 and her BP is 140/78. The pulse ox alarm is going off and reads 89%. She keeps trying to take off her oxygen and

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the pulse ox probe. Her lungs have crackles bibasilar and in the right middle lobe. She has a nonproductive cough. She is not able to give a subjective pain level. Urine output is sufficient and her IV is intact. What is your next nursing intervention and what MD orders do you anticipate? (15 POINTS)

After 8 hours, Ms. Schmidt is suffering from pain, fever and respiratory issues. The other problems are secondary to these problems. The patient got relief from anaesthesia effect, so that she can't feel pain and due to this, her increased temperature is a sign of an infection. So my nursing intervention would be to prioritize the infection. I will inform the doctor first, and then carry out the doctor's order. So the signs of infection should be checked and a blood test, urine test, etc should be done. Give antipyretics medications as prescribed. Analgesics (Iv fluid) can be administered according to doctor's order. Next step, is to relieve respiratory issues. Crackles are due to mucus collection in her lungs in this case. She has a nonproductive cough, so she can do steam inhalation to release mucus. It will clear her airway. Her BP and respiratory rate should be monitored frequently and if it increases then it should be reported for the doctor. I would encourage fluid intake by mouth. Lastly, I would raise the side rails at all times to prevent injury/fall. The MD orders I anticipate are antipyretics, increase flow rate of oxygen, antibiotics, expectorants, NSAIDs, Mucolytics.

The following day you are assigned the same patient and receive her sitting in her chair with a tray of clear liquids in front of her. What assessment leads you to feel comfortable with this diet choice? (5 POINTS)

The tray of clear liquid indicates that the patient is recovering from surgery and there is no more bleeding, or discharges related to surgery. The second day, fluid and electrolyte should be given through IV fluid only. After, the wound heals the patient can take food orally.

What would you look for next in your GI assessment? (5 POINTS)

Inspect for discharge, bleeding, swelling in site, check if colostomy bag is properly placed, palpate the abdominal area for tenderness, internal organs density, any mass collection etc. I will percuss to identify a gas collection, fluid collection etc., Lastly, I will asculate for any bowel sounds, or movements.

You notice that Mrs. Schmidt is wearing oxygen at 2L NC and breathing comfortably at 16 breaths/minute. She is being treated with IV antibiotics for a RML pneumonia. Alert and oriented X 3. She c/o slight pain on inspiration. Lungs with scattered crackles R>L. She is answering questions coherently and asks you when she is being discharged. What is your response? (10 POINTS)

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I would say “Mrs. Schmidt you are now in Oxygen therapy, without this therapy your oxygen saturation will drop below the normal level. We are observing that your Sp02 levels and breath sounds are normal. The chest infection is still there that's why the doctor is giving you IV antibiotics. However, once its suppressed the doctor will change the intravenous antibiotics to oral antibiotics and we will take away the oxygen. Then you’ll be able to go home.

.What medications do you anticipate Mrs. Schmidt to have ordered during this hospitalization? (5 POINTS)

I anticipate she would have ordered levofloxacin and a cephalosporins.

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