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NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology

Normal Structures

The oral cavity is the first part of the digestive system, responsible for the initial breakdown of food. It includes structures such as the gums, teeth, tongue, and salivary glands. Saliva, produced by the parotid, submandibular, and sublingual glands, helps break down carbohydrates and forms a food bolus for swallowing. The bolus moves into the pharynx and then into the esophagus, where peristalsis moves food toward the stomach. The upper esophageal sphincter (UES) prevents air from entering the esophagus, while the lower esophageal sphincter (LES) prevents stomach acid from refluxing. The stomach, located in the upper left abdomen, secretes digestive juices and churns food into chyme, which is released into the duodenum. The pancreas releases enzymes like amylase, protease, and lipase, which aid in the digestion of starches, proteins, and fats. The liver produces bile, which is stored in the gallbladder and released to aid in fat digestion. The intestines absorb nutrients, with the small intestine being primarily responsible. The small intestine is divided into the duodenum, jejunum, and ileum. The duodenum (20-25 cm) absorbs nutrients like iron, calcium, and zinc while neutralizing stomach acid. The jejunum absorbs sugars, amino acids, and fatty acids. The ileum absorbs remaining nutrients and vitamin B12, which is crucial for metabolic functions, aided by the intrinsic factor from the stomach.

Pathophysiology of Disease

Crohn's disease is a form of inflammatory bowel disease (IBD) that results in inflammation, or swelling and irritation, of the digestive tract's tissues. Malnutrition, exhaustion, severe diarrhea, and stomach pain might result from this. People with Crohn's disease may experience inflammation in different parts of their digestive tracts. The beginning of the large intestine and the end of the small intestine are most affected by Crohn's disease. Fistulas and skip lesions are also common with Crohn's. The deeper layers of the bowel are frequently affected by the inflammation.

NCLEX IV (7): Reduction of Risk

Anticipated Diagnostics

Labs

CBC
CMP
Serum electrolyte
Amylase 60-120 U/L
Gastrin-25-100pg/mL
Lipase- 0/160 L
Fecal analysis
Stool occult
Gastric analysis
BUN, Cr
C-reactive protein
Vitamin B12 levels
Folic acid levels

Additional Diagnostics

H&P, Bleeding scan, Testing of stool of occult blood, Urinalysis, CT scan with oral contrast, Abdominal / chest x-ray, MRI, Ultrasound, Barium swallow, EGD, Colonoscopy, Contrast enema

NCLEX II (3): Health Promotion and Maintenance

<u>Contributing Risk Factors</u>
<ul style="list-style-type: none">• Hx of smoking• Oral contraceptives• Family hx of Crohn disease• Diets high in animal fats• Intestinal atresia• Medications that slow down intestinal motility, anticholinergics• Psychotropic medications• Bariatric• Colorectal,• Gynecologic• Trauma• Resection of intra-abdominal tumors• Excessive alcohol consumption• NSAIDS

<u>Signs and Symptoms</u>
<ul style="list-style-type: none">• Diarrhea• Colicky abdominal pain• tenderness• Weight loss• Fistulas, fissures, perianal lesions• Chills• Constipation• Inability to pass flatus• Fever• Hypotension• Lethargy• sepsis systemic• Leukocytosis (increased WBCs)• Metabolic acidosis• N/V• Abdominal pain• Palpable abdominal or rectal mass• Peritonitis• Rigid abdomen• Hypotension

NCLEX IV (7): Reduction of Risk

<u>Possible Therapeutic Procedures</u>
<u>Non-surgical</u> <ul style="list-style-type: none">• Ng suction• Paracentesis• Video capsule endoscopy-visualization of GI tract <u>Surgical</u> <ul style="list-style-type: none">• Reconstruction of involved colon• Temporary colostomy (ileostomy)• Laparoscopy• Colonoscopy• Defecography-detects pelvic floor abnormalities• Partial resection

<u>Prevention of Complications</u>
(What are some potential complications associated with this disease process) <ul style="list-style-type: none">• Electrolyte and fluid imbalances, such as dehydration• Hypovolemic shock• Intestinal peritonitis, perforation, ischemia, or necrosis• Intra-abdominal abscess• Multi-organ failure• Postoperative paralytic ileus• Renal insufficiency• Sepsis• Short bowel syndrome• Strangulation Hemorrhage• Perforation• Stricture-narrowing of passageway• Intrabdominal force

NCLEX IV (6): Pharmacological and Psychosocial/Holistic

<u>Parenteral Therapies</u>
<u>Anticipated Medication Management</u> <ul style="list-style-type: none">• IV fluids and electrolyte replacement as ordered• Antibiotic therapy• Analgesics• Antiemetics• PPI's• H2 inhibitors

NCLEX IV (5): Basic Care and Comfort

<u>Non-Pharmacologic Care Measures</u>
<ul style="list-style-type: none">• NPO• smoking cessation• clear liquid diets• provide oral care• bed rest

NCLEX III (4):

<u>Care Needs</u>
<u>What stressors might a patient with this diagnosis be experiencing?</u> <ul style="list-style-type: none">• Anxiety• Depression• Self-image deficit• Pain with ADLS• Pain after eating



Client/Family Education

List 3 potential teaching topics/areas

- Teach importance of following a high fiber diet, mainly fruits and vegetables with decreased intake of fat and red meat, encourage smoking cessation
- Encourage a fluid intake of at least 2,000 mL
- Avoid straining while defecating, vomiting, bending, lifting heavy, and wearing tight constrictive clothing.

NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement

(Which other disciplines do you expect to share in the care of this patient)

- Gastrologist
- Nurse
- Dietitian
- PT
- OT
- Case management

Medical Diagnosis/Disease: GI bleed

Potential Patient Problems (Nursing Diagnoses)

To Be Completed Before the Simulation

Anticipated Patient Problem: Decreased fluid volume

Clinical Reasoning: Due to NPO status

Goal 1: By the end of my time of care the pt HR(~60-100) and BP (~120/80) will be within their normal range.

Relevant Assessments	Multidisciplinary Team Intervention
(Prewrite) What assessments pertain to your patient's problem? Include timeframes.	(Prewrite) What will you do if your assessment is abnormal?
Monitor bowel sounds frequently and consistency of stool PRN	Insert NG tube for bowel decompression PRN
Monitor I's and O's along with weight q12hr	Maintain normal saline infusion at indicated rate q6hr
Assess (BP) /vital signs q4hr	Position HOB flat and notify HCP immediately if sudden or life-threatening PRN
Assess nutritional deficiency before and throughout therapy PRN	Encourage small frequent meals high in protein q4hr
Monitor daily skin turgor q12 hours	Encourage fluid intake of 100 mL hourly
Assess oral mucosa(pink moist and intact) BID	Encourage oral hygiene and moist mouth swabs BID

Goal 2: By the end of my time of care the pt will not experience vomiting, or diarrhea.

To Be Completed Before the Simulation

Anticipated Patient Problem: Acute pain

Clinical Reasoning: D/t diagnosis of Crohn's disease

Goal 1: By the end of my time of care the pt will report a pain of 0-10.

Relevant Assessments	Multidisciplinary Team Intervention
(Prewrite) What assessments pertain to your patient's problem? Include timeframes.	(Prewrite) What will you do if your assessment is abnormal?
Assess pain level using numeric scale 0-10 q8hr	Demonstrate splinting the abdomen while sitting PRN
Assess HOB upon entering the room q2hr	Maintain bed in semi fowlers q6hr
Assess for restlessness, anxiety, tachycardia q4hr	Report findings and administer pain medications PRN (IV morphine)
Obtain history of ongoing pain experiences at beginning of shift	Encourage pt to self-report pain symptoms when experiencing pain PRN
Assess pt ROM q8hr	Encourage moderate ambulation or passive/ active ROM or administered (Infliximab IV) q2hr
Assess RR and usage of accessory muscles q4hr	Promote IS x10 hourly use while taking analgesics PRN

Goal 2: Pt HOB will be maintained at semi-fowlers position by the end of my time of care.

To Be Completed During the Simulation:

Actual Patient Problem: Decreased fluid volume

Clinical Reasoning: Due HR over 100, and BP lower than ~110/70 Goal: By the end of my time of care the pt HR(~60-100) and BP (~120/80)will be within their normal range. Met: Unmet:

Goal: By the end of my time of care the pt will not experience vomiting or diarrhea.
Met: Unmet:

Actual Patient Problem: Acute pain

Clinical Reasoning: Resulting from GI bleed Goal: By the end of my time of care the pt will report a pain of 0-10
Met: Unmet:

Goal: Pt HOB will be maintained at semi-fowlers position at the end of my time of care. Met: Unmet:

Additional Patient Problems: Risk for hemorrhage, Inadequate nutritional intake

Below will be your notes, add more lines as needed. **Relevant Assessments:** Indicate pertinent assessment findings.
Multidisciplinary Team Intervention: What interventions were done in response to your abnormal assessments?
Reassessment/Evaluation: What was your patient's response to the intervention?

Patient Problem	Time	Relevant Assessments	Time	Multidisciplinary Team Intervention	Time	Reassessment/Evaluation
Decreased fluid volume	0840	Obstructed abdominal intestinal wall	0840	NSS 0.9 infusion	1100	NSS infusion maintained throughout treatment w/o signs of phlebitis, or chills
Acute pain	0840	Abdominal pain score 6-10 located at the top of the stomach worsened by stress from work and has up to 5 drinks per night	0840	Encouraged client to find other ways to release stress such as watching tv or reading books, but none are of interest, suggested alternatives such as	1100	"I want to work on decreasing stress, maybe I could take walks in the parks during the afternoons"
Decreased fluid volume	0840	Ostomy bag ½ filled with sanguineous filled	0840	Initiated blood transfusion of 1 ½ packed RBCs transfused	0900	Transfusion maintained at rate, no erythema, or signs of phlebitis
Decreased fluid volume	0900	States feeling lighted headed, and dizzy skin cool and pale	0900	vital signs BP 94/56 Pulse: 110min RR: 26 SaO2 94% and placed O2 mask 2L	0905	Lowered the HOB, applied blankets

				w/ cold clothe		
Acute pain	0930	Presents as restless, and faced flushed w/ reports of a headache, temp: 38.8, pulse: 96/min, BP: 103/60	0930	Blood transfusion stopped; provider called immediately	1000	States feeling better in the morning after receiving pain medication
Acute pain	1030	Pain and discomfort in abdomen w/ grimacing after endoscopy, pain 8-10, located in upper abdomen (tender to touch)	1030	0.5 mL IV morphine administered	1050	States feeling much better pain 2/3-10
Inadequate nutritional intake	1100	States only eating a yogurt and granola bar upon having a stressful day w/ a latte, lunch turkey sandwich w/ water, diner wine w/ paste, salad w/nuts and a glass of wine	1100	Encourage foods high in protein, information packet provided w/ nutritional alternatives discussed during admission	1100	"Thank you I feel so much better after talking to you, having a plan at home will help me know what to do, maybe I could pack lunches from home or make smarter eating choices"
Decreased fluid volume	1100	Requested ibuprofen post-op GI bleed	1100	Educated client on the importance of limiting intake of ibuprofen d/t it being irritating to the GI tract along with reading other drug labels	1200	Verbalized understanding of limiting ibuprofen d/t increased risk of GI bleed
Risk for hemorrhage	1130	Post-op GI bleed; discharge	1200	Educated pt on limiting caffeine and high fiber foods	1200	Verbalized limiting both caffeine and high fiber foods because it may obstruct the stoma

ATI Virtual Clinical Questions and Reflection:

- 1) Identify two members of the healthcare team collaborating in the care of this patient:
 - a. **Gastroenterologist**
 - b. **Nurse**
- 2) What were three steps the nursing team demonstrated that promoted patient safety?
 - a. **Did a H&P and abdomen assessment before and after surgery.**
 - b. **Discontinued a blood transfusion as soon as symptoms of a transfusion reaction occurred.**
 - c. **Provided the client with educational resources such as pamphlets during and after discharge such as nutritional guides.**
- 3) Do you feel the nurse and medical team utilized therapeutic communication techniques when interacting with individuals, families, and health team members of all cultural backgrounds?
 - a. If **yes**, describe: **Yes, the nurse used therapeutic communication while assessing the client for abdominal discomfort, which she followed by offering medication to help with the pain.**
 - b. If **no**, describe: _____

Reflection

- 1) Go back to your Preconference Template:
 - a. Indicate (circle, star, **highlight**, etc.) the components of your preconference template that you saw applied to the care of this patient.
- 2) What was the priority nursing problem? Provide rationale.

_____The priority nursing problem was Decreased fluid volume. Prior to surgery the pt ileostomy bag was ~1/2 full of sanguineous blood which is why she needed a blood transfusion.

- 3) Review your Patient Problem Form: Did you see many of your anticipated nursing assessments and interventions used?
 - a. Were there interventions you included that *were not* used in the scenario that could help this patient?
 - i. If **yes**, describe: _____Interventions that could have been used include, splinting the abdomen pre- and post-operatively, oral hygiene or mouth swabs could have been used since she was NPO. An NG tube could have also been used to decompress the

