Post-op Pain Management: Day of Surgery (1/2)

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Sheila Dalton, 52 years old

Primary Concept
Pain
Interrelated Concepts (In order of emphasis)
1. Gas Exchange 2. Glucose Regulation 3. Perfusion 4. Inflammation 5. Clinical Judgment 6. Patient Education

FUNDAMENTAL Reasoning: STUDENT

Post-op Pain Management: Day of Surgery (1/2)

History of Present Problem:

Sheila Dalton is a 52-year-old woman who has a history of chronic low back pain and COPD. She had a posterior spinal fusion of L4-S1 today. She had an estimated blood loss (EBL) of 675 mL during surgery and received 2500 mL of Lactated Ringers (LR). Pain is currently controlled at 2/10 and increases with movement. She was started on a hydromorphone patient-controlled analgesia (PCA) with IV bolus dose of 0.1 mg and continuous hourly rate of 0.2 mg. Last set of VS in post-anesthesia care unit (PACU) P: 88; R: 20; BP: 122/76; requires 4 liters per n/c to keep her O2 sat >90 percent. You are the nurse receiving the patient directly from the PACU.

Personal/Social History:

Sheila is divorced and currently lives alone in her own apartment. She has two grown children from whom she is estranged.

What data from the histories are RELEVANT and have clinical significance to the nurse?

RELEVANT Data from Present Problem:	Clinical Significance:
COPD EBL of 675ml L4-S1 surgery PCA hydromorphone 4L of NC pain 2/10 IV 2500ml of LR	-COPD they have airflow blockage which makes it difficult to breath. She can use the incentive spirometry - Client has lost blood during surgery.
RELEVANT Data from Social History:	**Clinical Significance:**
Divorced Lives alone Has two children	-She has no support to help with recovery -She will need additional assistance upon discharged.

Developing Nurse Thinking by Identifying Significance of Clinical Data

Patient Care Begins–Arrives from PACU to Surgical Floor

Current VS:	P-Q-R-S-T Pain Assessment (5th VS):	
T: 100.2 F/37.9 C (oral) H	Provoking/Palliative:	Movement/lying still
P: 110 (regular) ✓	Quality:	Ache
R: 24 H	Region/Radiation:	Lumbar-incisional
BP: 98/50 low	Severity:	6/10-gradually increasing pain elevated
O2 sat: 88% 4 liters per n/c	Timing:	Continuous since arrival from PACU

What VS data are RELEVANT and must be recognized as clinically significant by the nurse?

RELEVANT VS Data:	Clinical Significance:
T: a little high P: normal R: normal B/P: low O2: normal w/ COPD pain 6-10	T: Is high and she could possibly have an infection from surgery. B/P: Low and it can be due to (EBL) from surgery. pain: Is severly high and it needs to be managed.

Due to pain

Current Assessment:	
GENERAL APPEARANCE:	Appears uncomfortable, body tense, frequent grimacing–last used PCA 10 minutes ago
RESP:	Breath sounds clear with equal aeration ant/post but diminished bilaterally, non-labored respiratory effort, occasional moist–nonproductive cough (COPD)
CARDIAC: ✓	Pale-pink, warm and dry, no edema, heart sounds regular–S1S2, pulses strong, equal with palpation at radial/pedal/post-tibial landmarks
NEURO: ✓	Alert and oriented to person, place, time, and situation (x4)
GI:	Abdomen soft/non-tender, bowel sounds hypoactive and audible per auscultation in all 4 quadrants, c/o nausea
GU: ✓	Foley catheter secured, urine clear/yellow, 100 mL the past two hours
SKIN: ✓	Skin integrity intact, skin turgor elastic, no tenting, dressing in place with no drainage noted

What assessment data are RELEVANT and must be recognized as clinically significant by the nurse?

RELEVANT Assessment Data:	Clinical Significance:
General appearance:	Body tense and grimacing which she will need medications soon.
Resp:	Diminished lung sounds and occasional moist-non productive cough - (COPD?)
GI:	Bowel sounds hypoactive: maybe she will get constipated soon (so keep doing GI Assessment)

Developing Nurse Thinking through APPLICATION of the Sciences

Fluid & Electrolytes/Lab/diagnostic Results:

Complete Blood Count (CBC):	Current:	High/Low/WNL?	Prior:
WBC (4.5–11.0 mm 3)	11.8	a little high	7.2 WNL
Hgb (12–16 g/dL)	10.4	WNL	15.2 WNL
Platelets (150–450 x10³/µl)	220	WNL	258 WNL
Neutrophil % (42–72)	85	H	68 L
Band forms (3–5%)	1	L	1 L

What lab results are RELEVANT and must be recognized as clinically significant by the nurse?

RELEVANT Lab(s):	Clinical Significance:	TREND: Improve/Worsening/Stable:
WBC	A little high	Worsening
Neutrophil	High → possible infection?	Worsening
Band forms	Low (immature form of neutrophils) related w/ WBC/infection	Stable but low

Basic Metabolic Panel (BMP):	Current:	High/Low/WNL?	Prior:
Sodium (135–145 mEq/L)	134	L	136 WNL
Potassium (3.5–5.0 mEq/L)	3.8	WNL	3.9 WNL
Glucose (70–110 mg/dL)	148	H	98 WNL
BUN (7–25 mg/dl)	20	WNL	22 WNL
Creatinine (0.6–1.2 mg/dL)	0.9	WNL	1.1 WNL

What lab results are RELEVANT and must be recognized as clinically significant by the nurse?

RELEVANT Lab(s):	Clinical Significance:	TREND: Improve/Worsening/Stable:
Sodium	low - something w/ fluids ?	worsening (but for a little)
Glucose	Elevated - But she has no DM maybe she ate has to do w/ pain	worsening

Lab Planning–Creating a Plan of Care with a PRIORITY Lab:

Lab:	Normal Value:	Why Relevant?	Nursing Assessments/Interventions Required:
Hemoglobin Value: 10.4	(12-16) Critical Value: < 6.0g/dL ≥ 22.0g/dL	the pt may have low RBC?	Close monitoring of labs (Hgb), HH and RBC. Due to ESL this pt may need a Blood transfusion if the Hgb gets lowered.

Pharmacology:

Home Med:	Classification:	Mechanism of Action (in own words):	Nursing Considerations:
Atenolol	Beta- Blocker Antihypertensive	helps lower BP	- Do not take if you have Asthma, it can cause bronchospasm - mask s/s of hypoglycemia, so be careful - can develop bradycardia, so don't stop abruptly.
Lisinopril	Ace inhibitor Antihypertensive	helps lower BP	- Do not take if you are (preg) - Dry persistent cough AE: Dizziness / Orthostatic hypotension
Citalopram	(SSRI) Antidepressant	help w/ mood swings and helps reduce depression	- watch closely for serotonin syndrome AE: chills, fever, restlessness, shaking, tremors etc...
Hydrocodone/ acetaminophen	(opiod analgesic)	Helps with pain relief.	- can cause respiratory depression "COPD" be careful - can cause constipation so be aware since she will be on bed rest
Aspirin	NSAID	To reduce fever and mild to moderate pain	- Do not crush - Do not drink alcohol

Pathophysiology:

1. What is the primary problem that your patient is most likely presenting?

The patient is probably experiencing atelectasis because COPD can cause many problems after surgery.

2. What is the underlying cause/pathophysiology of this primary problem?

History of COPD and the client just had surgery

Developing Nurse Thinking by Identifying Clinical RELATIONSHIPS

1. What is the RELATIONSHIP of the past medical history and current medications?
(Which medication treats which condition? Draw lines to connect)

Past Medical History (PMH):	Home Meds:
• Low back pain with lumbar compression fracture	Atenolol 50 mg daily
• Depression	Citalopram 40 mg daily
• COPD	Acetaminophen/hydrocodone 1-2 tabs every 4 hours prn pain
• Hypertension	Lisinopril 40 mg daily
• 2 ppd smoker x 32 years	Aspirin 81 mg daily

2. Is there a RELATIONSHIP between any disease in PMH that may have contributed to the development of the current problem? (Which disease likely developed FIRST then began a "domino effect"?)

PMH:	What Came FIRST:
• Low back pain with lumbar compression fracture • Depression • COPD • Hypertension • 2 ppd smoker x 32 years	1. Was ppd smoker 2. COPD **What Then Followed:** 3. Depressional Guilt 4. HTN 5. low back pain

3. What is the RELATIONSHIP between the primary care provider's orders and primary problem?

Care Provider Orders:	How it Will Resolve Primary Problem/Nursing Priority:
Hydromorphone PCA–Settings: *Bolus: 0.1–0.3 mg every 10" *Continuous: 0.1–0.3 mg *Max every 4 hours: 6 mg	Self administration of analgesic. The pt is able to administer pain relief as soon as they feel pain.
Continuous pulse oximetry	Closely monitor pts oxygen
Ondansetron 4 mg IV push every 4 hours prn nausea	→ Can help w/ N/V if the pt will have side effects of anesthesia
Titrate O2 to keep sat >90%	→ Pt will receive enough O2 due to COPD
Incentive spirometer (IS) 5–10x every hour while awake	→ Expand the lungs / settings better O2

This patient need enough O2 w/ COPD
Can opiods can cause a respiratory depression

0.9% NS 100 mL/hour IV	- fluids are always good
Clear liquids/advance diet as tolerated	- Good mornings
Apply lumbar orthotic brace when up in chair or ambulating	- Early ambulation will help have faster recovery
Basic Metabolic Panel (BMP) in morning	Check body fluids, electrolyte
Complete Blood Count (CBC) in morning	- they need to keep checking RBC, HH and HCT

Developing Nurse Thinking by Identifying Clinical PRIORITIES

1. **Which Orders Do You Implement First and Why?**

Care Provider Orders:	Order of Priority:	Rationale:
1. Hydromorphone PCA	1.	pain management before ambulating
2. Continuous pulse oximetry	4.	O2 has to be good before doing anything
3. Ondansetron (Zofran) 4 mg IV push every 4 hours prn nausea	2.	Close O2 sat monitoring
4. Titrate O2 to keep sat >90%		-
5. Incentive spirometer (IS)	6.	- apply the lumbar brace without pain since the pain med was given
6. Apply lumbar orthotic brace when up in chair or ambulating	3.	- Give another med since the pt may feel nauseated - now that the pt got transported to the chair
7. Clear liquids/advance diet as tolerated	5.	- IS - and set fluids
	7.	

2. ***What nursing priority(ies) will guide your plan of care?*** *(if more than one-list in order of PRIORITY)*

6. having the patient move and start early ambulation will help the patient a lot.

3. ***What interventions will you initiate based on this priority?***

Nursing Priority:	Nursing Interventions:	Rationale:	Expected Outcome:
have the pt move to a chair will help improve post op.	Give the patient medication to control pain before doing any of this things.	- faster recovery	- the patient will be going home sooner if there's early ambulation

4. *What are the PRIORITY psychosocial needs that this patient and/or family likely have that will need to be addressed?*
   The patient lives alone, has to children whom she doesn't have communication with them. She has no support system.

5. *How can the nurse address these psychosocial needs?*
   She will be provided wit information about options such as home care.

6. *What educational/discharge PRIORITIES will be needed to develop a teaching plan for this patient and/or family?*
   Ask the patient to get in contact with a friend or if she has any religious practices she would like to do.

Caring & the "Art" of Nursing

1. *What is the patient likely experiencing/feeling right now in this situation?*
   The patient is more likely experiencing loneliness and depression

2. *What can I do to engage myself with this patient's experience, and show that he/she matters to me as a person?*
   Be compassionate, sit and listen to her, tell her everything will be fine.

Use Reflection to THINK Like a Nurse

Reflection-IN-action (Tanner, 2006) is the nurse's ability to accurately interpret the patient's response to an intervention in the moment as the events are unfolding to make a correct clinical judgment and transfer what is learned to improve nurse thinking and patient care in the future.

1. *What did I learn from this scenario?*
   having family close by is very important during difficult times

2. *How can I use what has been learned from this scenario to improve patient care in the future?*
   Provide the appropriate care while being compassionate at the same time.