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

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

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:
spinal fusion done today 675mL blood loss received 2500mL LR pain increases with movement 4Liters nc HX: COPD chronic back pain 1	the significance is I need to know what to manage for the patient: keep on 4 Liters of oxygen, check procedure site for bleeding or infection, manage pain and movement that increases pain, monitor IV and labs
RELEVANT Data from Social History:	**Clinical Significance:**
divorced lives alone estranged from children	motivation to heal and get well depression

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)	Provoking/Palliative:	Movement/lying still
P: 110 (regular)	Quality:	Ache
R: 24	Region/Radiation:	Lumbar-incisional
BP: 98/50	Severity:	6/10-gradually increasing
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:
temperature of 100.2 rr too high bp low oxygen low despite 4 Liters pain increasing	signs of sepsis are occuring

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
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:
tense and grimacing breath sounds diminished bilaterally occasional non productive cough	narrowing down what could be the cause of elevated vital signs

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		7.2
Hgb (12–16 g/dL)	10.4		15.2
Platelets (150–450 x10₃/µl)	220		258
Neutrophil % (42–72)	85		68
Band forms (3–5%)	1		1

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: elevated Hgb: decreasing rapidly platelets decreasing neutrophils:elevated band forms: critical	pt is declining	worsening

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

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 declining potassium declining not yet in critical condition there is high glucose creatinine decreasing	the patient is declining	woresening

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

Lab:	Normal Value:	Why Relevant?	Nursing Assessments/Interventions Required:
Hemoglobin Value: 10.4	Critical Value:	oxygen distribution in the blood	cap reflll lung auscultation look for cyanosis administer another Liter of oxygen

Pharmacology:

Home Med:	Classification:	Mechanism of Action (in own words):	Nursing Considerations:
Atenolol	beta blocker	helps blood flow into the arteries and veins	do not stop abruptly or against pysician orders if so can cause an MI or ventricular arrhythmias
Lisinopril	ace inhibitor	treats high blood pressure	it is common for your renal creatinine levels to increase dizziness and hypotension are common side effects
Citalopram	antidepressant	Treat major deppressive disorder	dry mouth insomnia sweating
Hydrocodone/ acetaminophen	opioid pain reliever	pain reliever	respiratory depression
Aspirin	salicylate	reduces inflamatin pain prevent heat failure and chest pain	dyspepsia heartburn black tarry stools

Pathophysiology:

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

hypoxia

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

vasso constriction

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 • Depression • COPD • Hypertension • 2 ppd smoker x 32 years	Atenolol 50 mg daily Citalopram 40 mg daily Acetaminophen/hydrocodone 1-2 tabs every 4 hours prn pain Lisinopril 40 mg daily 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	**COPD** **What Then Followed:** **hypertension**

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 Continuous pulse oximetry Ondansetron 4 mg IV push every 4 hours prn nausea Titrate O2 to keep sat >90% Incentive spirometer (IS) 5–10x every hour while awake	the relationship between orders and primary problem is that we are working on better the paitents oxygen level and pain level also opening up those luungs for air way

0.9% NS 100 mL./hour IV Clear liquids/advance diet as tolerated Apply lumbar orthotic brace when up in chair or ambulating Basic Metabolic Panel (BMP) in morning Complete Blood Count (CBC) in morning	healing from procedure we do not want to form blood clots in the arteries or veins

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 2. Continuous pulse oximetry 3. Ondansetron (Zofran) 4 mg IV push every 4 hours prn nausea 4. Titrate O2 to keep sat >90% 5. Incentive spirometer (IS) 6. Apply lumbar orthotic brace when up in chair or ambulating 7. Clear liquids/advance diet as tolerated	1 5 4 2 7 3 6	i would want to get rid of the pain so the patient can tolerate other interventions i want to open up the lungs before i start administering more oxygen i would want to give all meds before trying to ambulate

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

lack of oxygen
pain
healing

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

Nursing Priority:	Nursing Interventions:	Rationale:	Expected Outcome:
lack of oxygen	Titrate oxygen adminster meds insentive spirometry	oxygen needs to be circulating throughout the body	with in limit lab values

4. *What are the PRIORITY psychosocial needs that this patient and/or family likely have that will need to be addressed?*

the fact that she is basically alone with no family recently divorced and estranged from children can be hard on any one

5. *How can the nurse address these psychosocial needs?*

request a therapist or find information about outside community groups

6. *What educational/discharge PRIORITIES will be needed to develop a teaching plan for this patient and/or family?*

follow all medication orders contact physician with any emergent side effect symptoms

Caring & the "Art" of Nursing

1. *What is the patient likely experiencing/feeling right now in this situation?*

the patient might be experiencing depression due to lonlliness

2. *What can I do to engage myself with this patient's experience, and show that he/she matters to me as a person?*

let the patient express their fellings and repeating the information back to the patient

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?*

recognizing cues

2. *How can I use what has been learned from this scenario to improve patient care in the future?*

by proiritizing imediate needs of the patient