# 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<br>2. Glucose Regulation<br>3. Perfusion<br>4. Inflammation<br>5. Clinical Judgment<br>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: |
|---|---|
| hx of chronic low back pain<br>posterior spinal fusion<br>4 L n/c, EBL<br>pain ↑ w/movement | needs more attention regarding pain; COPD already struggles w/ breathing:<br>monitor pain |
| **RELEVANT Data from Social History:** | **Clinical Significance:** |
| alone | no one to help just her so if she falls she is on her own |

## 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: |
|---|---|
| R=24<br>P= 6/10<br>BP= 98/50<br>T= 100.2<br>$O_2$=88% | ↑ pulse because of pain; BP because of EBL; temp can indicate infection; we will continuously monitor all of these |

| 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: |
|---|---|
| uncomfortable, grimacing, diminished breath sounds, | something is up w/ breathing<br>what is causing pt to be uncomfortable and grimace<br>↳ probably pain |

## 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 x10$_3$/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<br>Hgb | ↑ WBC = infection<br>Hgb = bleeding | |

| 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 —<br>glucose — | low blood volume<br>elevated stress hormones | worsening |

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

| Lab: | Normal Value: | Why Relevant? | Nursing Assessments/Interventions Required: |
|---|---|---|---|
| Hemoglobin<br><br>Value:<br>10.4 | Critical Value: | hemoglobin is low | blood transfusion to improve |

**Pharmacology:**

| Home Med: | Classification: | Mechanism of Action (in own words): | Nursing Considerations: |
|---|---|---|---|
| *Atenolol* | beta adrenergic | ↓ cardiac output<br>↓ cardiac excitability<br>↓ $O_2$ demand | not routinely withheld |
| *Lisinopril* | ACE inhibitor | secrete aldosterone | monitor BP closely |
| *Citalopram* | SSRI antidepressant | blocks serotonin | reduce gradually |
| *Hydrocodone/ acetaminophen* | opioid analgesic | pain reliever | use w/ caution in COPD patients |
| *Aspirin* | NSAID | blood thinner in low doses | ask about tinnitus |

## Pathophysiology:

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

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

## 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<br>• Depression<br>• COPD<br>• Hypertension<br>• 2 ppd smoker x 32 years | Atenolol 50 mg daily<br>Citalopram 40 mg daily<br>Acetaminophen/hydrocodone 1-2 tabs every 4 hours prn pain<br>Lisinopril 40 mg daily<br>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<br>• Depression<br>• COPD<br>• Hypertension<br>• 2 ppd smoker x 32 years | 2 packs per day for 32 years<br>**What Then Followed:**<br>COPD, HTN, low back pain, depression |

*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:<br>*Bolus: 0.1–0.3 mg every 10"<br>*Continuous: 0.1–0.3 mg<br>*Max every 4 hours: 6 mg | keep pain under control |
| Continuous pulse oximetry | monitor $O_2$ sats |
| Ondansetron 4 mg IV push every 4 hours prn nausea | feel more comfortable |
| Titrate O2 to keep sat >90% | main $O_2$ levels |
| Incentive spirometer (IS) 5–10x every hour while awake | expand pt lungs |

| | |
|---|---|
| 0.9% NS 100 mL/hour IV | electrolytes |
| Clear liquids/advance diet as tolerated | hydration |
| Apply lumbar orthotic brace when up in chair or ambulating | help w/ pain and comfortableness |
| Basic Metabolic Panel (BMP) in morning | ] labs |
| Complete Blood Count (CBC) in morning | |

## 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 first, breathing, |
| 2. Continuous pulse oximetry | 2 | O2 sats, IS helps renal, |
| 3. Ondansetron (Zofran) 4 mg IV push every 4 hours prn nausea | 4 | take pts nausea away, |
| 4. Titrate O2 to keep sat >90% | 5 | brace, diet |
| 5. Incentive spirometer (IS) | 3 | |
| 6. Apply lumbar orthotic brace when up in chair or ambulating | 6 | |
| 7. Clear liquids/advance diet as tolerated | 7 | |

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

ABC's, and comfortability of pt

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

| Nursing Priority: | Nursing Interventions: | Rationale: | Expected Outcome: |
|---|---|---|---|
| monitor ABCs<br>comfortable | continuous focused assessments<br>frequent repositioning | keep an eye on abnormal changes happening | pt improves |

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

no family so up to her and staff

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

she can call when she needs anything, be nice, and just let her know you are there for her

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

go to rehab facility since no family

## Caring & the "Art" of Nursing

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

scared and alone

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

show you care and that the staff is going to do their best to help her

## 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?*

it kind of puts the nursing process into perspective

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

apply this to some of the situations I may one day encounter