

Adult Health Clinical Case Study

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NURS 453: Adult Health 2 Clinical

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October 9th, 2025

Introduction:

Patient S. S. is a 75-year-old female who is a patient on the orthopedic unit because she had a cervical laminectomy from C3-T1 due to having cervical myelopathy. This paper will discuss her medical diagnosis, the nursing diagnoses that accompany her care, and theories and evidence-based practices that dictate the nursing interventions we implemented in her recovery. This paper will also discuss goals for this patient's recovery and evaluation of if those goals were met during her care.

Medical Diagnosis:

S. S. has cervical myelopathy which is compression of the spinal cord in the neck, it can result from things like trauma, injury or a herniated disc. The most common type is spondylotic myelopathy which is the result of natural changes to your body as you age called degenerative changes; your bones, disks and ligaments become thinner or lose flexibility and strength (Jo, 2024). That is the type that this patient has, the notes from her physician said there was evidence of degeneration causing pressure to be put on the spine. This is also evidenced by the symptoms she had that brought her in which were severe neck pain that never went away, decreased balance she reported being very clumsy lately, and not feeling like herself. She also had tingling and numbness in both hands. All of which are symptoms related to that increased pressure on her spine.

Surgery is basically the only treatment option available to this patient and even then, she has spondylotic myelopathy so there's a chance that she could develop an issue somewhere else in her spine later down the road. However, for her current situation her surgeon determined a

laminectomy to be the appropriate surgical intervention. A cervical laminectomy is essentially the removal of the back part of your vertebrae to make more room in the spinal canal which then eases pressure off the spinal cord (Cleveland Clinic, 2023). S. S. had a cervical laminectomy from C3-T1, post operatively she now has significantly reduced pain, is using a walker to ambulate, wearing a cervical collar to limit movement, has movement restrictions she can't twist, lift, or bend and she has an incision on her neck that requires wound care. This is the condition the patient is in when brought to the orthopedic floor for recovery and nursing care.

Nursing Diagnosis:

1. Pain: Not every case is cut and dry, and though this patient underwent cervical spinal surgery her pain in the spine post operatively was actually minimal, her biggest complaint was the pain in her hip from having to lay still in bed. She rated her pain at a 2/10 where her incision site was and rated her pain in her hip at a 7/10.
2. Risk for infection: This patient is at high risk for infection because of the surgical incision on her neck, any time the body is cut open there is a risk for infection. In addition, this dressing will have to continually be changed allowing more exposure to potential pathogens with each dressing change.
3. Activity intolerance: Due to her surgical limitations this patient can't lift, twist, or bend over. This makes it incredibly difficult for her to perform activities of daily living or even adjust herself in bed and watch tv or eat her meals.
4. Disturbed sleep pattern: The patient reports that she has insomnia related to her depression. She states that she has trouble sleeping at night but then finds herself

randomly falling asleep during the day. She explained that at night she sits up and thinks about things that make her sad or anxious and she would like a sleep aid.

5. Risk for impaired skin integrity: The patient can't reposition herself in bed, she can't ambulate on her own, and she can't get up to void independently either so that places her at an increased risk for impaired skin integrity.

Seldom is it found that patient problems happen in a vacuum, instead they're all interconnected. This patient's hip pain causes her to want to lay on one side, and to be even more limited in her movement, and she has an activity intolerance issue which thus increases her risk for impaired skin integrity. The patient's pain is also impacting her ability to sleep, as she says that the pain increases in the evening time. The nature of this patient's surgery and required recovery protocol indicates some major deficits in self-care, she's in pain, she can't ambulate freely, and she is wearing a neck brace that further limits her mobility and ability. Therefore, the approach to caring for this patient needs to meet her where she's at each step of the way in this process. Dorothea Orem's Self-Care Deficit Nursing theory is an integrated framework for how to give that care and how to shift from complete care to partial care as you transition a patient into getting ready to be on their own again. Using this model, though the patients care will involve help with ambulation and activities of daily living the entire time, it's understood that how much the nurse will be involved in these activities will hopefully decrease over time as she recovers and requires less care.

Outcomes:

The two priority nursing diagnosis for this patient are pain and risk for infection, because they are the most troublesome to the patient and concerning at the present time. In regard to pain, the goal for this patient is to decrease her pain as much as possible, so by the end of the shift this patient will report a 2/10 on the numeric pain scale. Additionally, the goal for the patient in respect to infection risk is of course to not get an infection. So, the patient will be free of infection as evidenced by vital signs within normal range and lack of evidence of infection at the incision site such as swelling, redness, and purulent drainage from non-intact areas of skin for the next 48 hours.

In order to achieve these outcomes quality nursing care is not only necessary but actually can dictate the success of these outcomes because without comprehensive nursing care the patient may not have all the resources necessary for a speedy and uncomplicated recovery. A study conducted in 2024 concluded that comprehensive nursing care, “alleviating pain, reducing inflammation levels, and improving the overall quality of patient recovery without increasing the patient burden,” highlighting the crucial role nurses take on in a patient’s recovery process (Liang et al., 2024).

Interventions:

The priority problem for this patient is her pain. The first intervention that we provided for this patient was heating pads. Though she requested Tylenol, because that’s what she usually takes at home she reported, we had to explain to her that her physician was concerned about her acquiring an infection, and so he thought it was best to not let her have any Tylenol because it could potentially mask signs of infection like a fever. As the patient’s pain began to rise, she asked if there were other medicines that the doctor had on board for her pain, and we explained

she had several based on her pain scale, because there was the anticipation of post operative pain. The patient expressed that she didn't like to use opioids and requested to only take a half dose of the oxycodone that the physician ordered her, so we gave her 5 mg. The provider also prescribed 100 mg of gabapentin, which in this case is being used alongside the opioids to reduce pain but also to facilitate a reduction in total opioid consumption in the first 24 hours after surgery, and lower the risk of opioid dependency. It also is more specific to nerve pain because it causes decreased release of neurotransmitters, which is especially effective for this type of spinal surgery (Chang et al., 2014). We also gave this patient 500 mg of Robaxin to relieve muscle spasms. Along with her pain assessment we checked her vital signs so that when we evaluate her pain again in we can compare and see if we notice any trends in her vitals as well.

The second priority problem for this patient is risk of infection, because not only does she have a large incision on the back of her neck, but she's also residing in a hospital, having her dressing changed, and stuck in bed not moving and getting good blood flow and circulation. All of these factors combined put her at great risk for infection. In order to mitigate this risk, the doctor ordered the patient be on a vancomycin drip through her IV, this was done prophylactically to cut off any budding infections. The risk for infection offers many teaching opportunities as well as having a large incision on the back of your neck that requires wound care. So, the priority education for this patient were the signs and symptoms of infection and how to perform proper hand hygiene. Another important intervention to prevent infection that is often overlooked is ambulation. Getting the patient up and moving is so important for recovery outcomes not just in terms of returning to normal function, but also in keeping blood moving through the body and doing it's job. There was a quality improvement project done aimed at the misconceptions about early mobilization on post operative care and how to help nurses

understand the important role that it plays in improving clinical outcomes, stating it, “can help prevent hospital-acquired weakness, or infection, and decrease hospital length of stay,” (Alexander, 2023). We worked in collaboration with physical therapy to make sure that we were helping the patient to move, position, and ambulate in the safest way possible and in accordance with the limitations placed on her by her surgery. With those limitations in mind we helped her to the bathroom several times and even had her walk up and down the hallway once toward the end of the shift. We also performed wound care and changed out her neck brace and the dressing because the dressing and the brace were both saturated in blood. Once we cleaned the wound and applied the new dressing we then got her a clean new brace and placed that as well.

Evaluation:

At this point the effectiveness of our plan of care is easy to see when it comes to the patient’s pain, her heart rate and blood pressure were within normal limits both when we initially checked it and when we came back 45 minutes after she’d been given her pain medications. Alongside that her pain rating went from a 7/10 to a 3/10 indicating relief from the pain to some degree. The patient reported that she was frustrated her hip still hurt and made sure to point out that though she were in less pain now, she was still in more pain than she’d like to be at all. We described to the patient what muscle spasms may feel like, and she reported that she wasn’t feeling any so that would indicate the Robaxin being effective. An additional intervention for the pain that S. S. was feeling in her hip could be isometric exercises that the nurse leads. A study done in 2022 found that after 12 weeks of nurse-led interventions like the isometric exercises were done, that patients had a significant improvement on their quality of life (Kangeswari &

Arulappan, 2022). Based on their findings it would be reasonable to assume that the same would be true for S.S. if she were to receive this kind of care for her hip.

Evaluating the outcome in reference to the risk of infection is tricky because there may be one brewing that doesn't have any symptoms yet. However, presently the patient shows no signs of infection. The incision site had no purulent drainage, the skin was intact and the appropriate color for her race. The teaching appears to have also been successful because the patient was able to readily identify common signs and symptoms of infection and when it's time to call her provider. The patient and her support person were also able to teach back how to perform proper hand hygiene when changing the dressing on her wound. The early ambulation is also benefiting the patient not only in reducing the effects of infection but also in keeping the rest of her body supplied with good blood flow.

Conclusion:

The care of Patient S.S. following her cervical laminectomy for cervical spondylotic myelopathy demonstrates the critical role of holistic, evidence-based nursing in promoting recovery, preventing complications, and supporting both physical and emotional well-being. Throughout her hospitalization, S.S. faced multiple interconnected challenges including pain management, limited mobility, risk for infection, and difficulty with sleep and self-care. By applying Dorothea Orem's Self-Care Deficit Nursing Theory, her plan of care focused on meeting her immediate needs while gradually fostering independence as her condition improved. This theoretical framework guided the nursing team in identifying where the patient required full

assistance and when it was appropriate to encourage greater self-participation in her recovery activities. Pain management remained the top priority for this patient, as her postoperative discomfort, particularly in her hip, significantly affected her mobility, mood, and rest. Preventing infection was another essential focus given the surgical incision, reduced activity level, and exposure to hospital pathogens. The resulting improvement in her pain score and vital signs indicated successful pain control and enhanced patient comfort. The absence of infection and the patient's ability to demonstrate understanding of her discharge education reflect the success of these interventions. Ultimately, the outcomes of S.S.'s care underscore how comprehensive nursing interventions, guided by both theory and current evidence-based practice, can significantly improve postoperative recovery and quality of life.

The knowledge I gained by working with this patient was centered around how to care for a patient in the way that is focused on their specific wants and needs, not just the protocol associated with their treatment or recovery. Each patient presents with unique physical, emotional, and psychosocial needs that require critical thinking and individualized care. I learned the specific restrictions and precautions that must be followed for patients recovering from spinal surgery in order to help with maintaining proper alignment, preventing falls, and promoting safe mobility while protecting the surgical site. Additionally, caring for a patient presented a challenge I wasn't expecting, helping a patient who was experiencing depression taught me the importance of empathy and active listening, as it was clear at times all this patient really needed was someone to hear about what was bothering her and agree it was worth being bothered by. This experience reinforced that comprehensive nursing care involves balancing medical guidelines with compassion, patient autonomy, and the nursing process.

Sources:

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