Nursing Care for the Recumbent Patient

Liz Hodson, BS, LVT, CCRP

Physical Rehabilitation

Auburn University College of Veterinary Medicine

Auburn, Alabama

334-707-0515

hodsoem@auburn.edu

Abstract-

The purpose of this lecture is to review the importance of nursing care when caring for a patient that is unable to reposition itself. Bedding, skin care, and physical rehabilitation will be covered during this lecture, as well as the difficulties often faced when caring for a down patient.

Key Words: Bedding, bladder management, hygiene, respiratory care, physical rehabilitation

Some of the most challenging patients to care for are those that are recumbent. While more effort is required to care for these patients, providing appropriate nursing care is essential to the outcome for these patients. Patients can be recumbent for any number of reasons including: trauma, endocrine disorders that cause weakness, orthopedic disease, neoplasia, neurologic disease, Degenerative Myelopathy (DM), Fibrocartilaginous Embolism (FCE), and Intervertebral Disc Disease (IVDD). Though the cause of recumbence may vary, there are specific issues to address while caring for recumbent patients.

While caring for the recumbent patient, it is important to be attentive to detail and anticipate complications that may arise. Common complications that occur in recumbent patients can range from respiratory dysfunction to dermatological issues from remaining in a down position. Muscle changes such as muscle shortening and disuse atrophy are also common because the muscles are not being used in their normal fashion.

To prevent or minimize these complications it is important to address all aspects of care to ensure a high quality of care and quality of life for the patient. The goal of nursing care is to

return the patient to a full, active life following surgery or injury and to ensure a high quality of life for those patients unable to return to normal function.

When considering the aspects of care that will minimize complications in recumbent patients, it is important to provide an environment that is beneficial to the patient as it heals. Management of any pain symptoms associated with being recumbent is of the utmost importance. Patients that care pain-free tend to heal quicker and be more amenable to treatments. The use of medications in conjunction with therapeutic laser, electrical stimulation, or acupuncture provides a multimodal approach to pain management that can be beneficial to the patient. When medications are administered, it is beneficial to provide them one to two hours before implementing physical rehabilitation.

Since the recumbent patient is typically unable to move and reposition itself, the proper bedding should be provided to minimize the occurrence of decubital ulcer formation. Proper bedding provides support and padding to the patient. The bedding should not be too bulky or deep as this may cause the patient to struggle and possibly cause further injury. There should also be enough padding to provide protection of the bony prominences that are prone to ulceration. The typical location of ulcers include the elbows, ischia, points of the hips, and even the lateral aspect of the tibia in some cases. Bedding should be disposable, washable, or non-permeable. There are many types of bedding available including egg crate mattress covers and air mattresses. To protect the bedding from urine and fecal contamination, a baby crib mattress cover can be placed over the bedding. This provides a washable means of protecting the bedding. Absorbent potty pads can be placed over the egg crate for easy cleaning and a layer of acrylic fiber padding can be placed over top of the potty pads before the patient is placed on the bedding. The acrylic fiber pad allows for moisture to drain away from the patient and assists in patient hygiene. The three layers of bedding provide support and protection for the bony prominences while also providing a means to absorb moisture and draw it away from the patient.

Monitoring the patient's skin and the hygiene of the patient is vital in preventing urine scald and associated dermatitis. The patient's skin should be monitored closely, every two hours, for signs of moisture or discoloration. The patient should be kept clean and dry preventing urine or fecal soiling. Patients with longer coats may require clipping of dermatitis prone areas, such as the perianal region, to aid in the grooming and bathing needed to protect the skin. If a patient is experiencing diarrhea, a tail wrap can be placed to avoid fecal soiling. In some cases, a patient will require a bath. While bathing a recumbent patient can be difficult, the use of a vented utility

wagon can make the task easier. The patient is able to be placed in the wagon in a sternal position and bathed and rinsed thoroughly without the water staying against their skin. After a bath, it is important to thoroughly dry the patient. If a full bath is not needed, a localized bath of soiled areas can be completed using baby wipes, gentle soap and water, or waterless shampoo. Though the patient's coat will not be thoroughly soaked, there will still be moisture present that will need to be dried. A moisture barrier cream or ointment can then be applied to dermatitis prone areas to aid in skin protection.

It is still possible for decubital ulcers to form even with good nursing care. Decubital ulcers complicate recovery and can cause infection and sepsis. The cause of these ulcers are continuous pressure on a specific area, typically over bony prominences, and soft tissue damage. To prevent ulcers, in addition to keeping the skin clean and dry, the patient should be rotated and placed in a standing position. If an ulcer does form, the area should be clipped and cleaned and a doughnut cushion should be placed over the area. This cushion will distribute pressure over a greater surface area and allow the soft tissue to begin to heal.

Assistive devices are available to aid in skin care. Devices such as standard DogLeggs (York, PA) provide additional padding over the elbows to prevent hygroma formation, and many commercially available booties are available to protect the feet from abrasions.

Even with ample bedding and additional padding over pressure points, a patient must be repositioned frequently to remove pressure from the pressure points. Patients should be rotated every four to six hours and be placed in right lateral, left lateral, and sternal in a rotating fashion. A pillow or bolster can be placed between the patient's legs. This not only allows for air circulation to the skin in the inguinal area, but it also allows for the limbs to be not adducted positioning allowing for the muscles and joints to stay in a neutral position. While the patient is recumbent, elevate the head to decrease the risk of aspiration pneumonia.

A patient that is currently recumbent and is typically active can experience depression and boredom. It will be important to combat this side effect by taking the patient outside three to five times a day for five to ten minutes to eliminate. This will allow some normalcy in their day. Providing enrichment such as toys and even music can also improve their mental well-being. A patient that is happy tends to be more willing to cooperate during treatments.

Depending on the cause of recumbence, bladder management will need to be considered. If a patient is able to urinate on its own, it should be taken outside to eliminate several times a day. The stream, quantity, and odor of the urine should be monitored. If there is ever a change in the

veterinarian should investigate the possible cause. If a patient is unable to urinate, manual expression, intermittent catheterization, or a long in-dwelling catheter may be necessary. By preventing the patient from urinating in its bedding, the skin is more likely to stay clean and dry. Diapers are available to minimize the amount of skin that may come into contact with urine. If a diaper is used, the skin should still be checked regularly to monitor for irritation and baby wipes can be used to clean the area.

In order for a patient to heal, proper nutritional support needs to be provided. A diet calculation should be performed to ensure the patient is receiving the appropriate calories. Preventing overfeeding will aid in weight control. A recumbent, obese patient will have a more difficult time during recovery that a more fit patient. When choosing a diet, it is important to know the patient's preferences, does the patient prefer dry kibble to canned food. Some patients lose their appetite while in the hospital or become anorexic. In these cases adding boiled chicken to entice them to eat or hand feeding them may be needed. There are also supplements that can be added to the diet to encourage eating. When feeding the patient, make sure they are sternal or even assisted standing. They should remain sternal for at least 30 minutes following the meal to prevent aspiration pneumonia. Small, frequent meals can also be given to prevent aspiration pneumonia if the patient is ravenous. The patient should not be left unattended during meals. It is also important to maintain hydration to decrease the occurrence of cystitis and urinary tract infections. Recumbent patients will need to be offered water or ice chips while in a sternal position to prevent aspiration.

Since recumbent patients are unable to move themselves, they are at a higher risk for developing pneumonia and decreased lung capacity. The patients are unable to fully inspire or expire causing a buildup of mucous in the lungs. Because of this risk, patients' respiratory rate and effort should be monitored. To prevent respiratory complications patients should be rotated frequently and placed in sternal. Rotating the patient frequently allows them to clear mucous from their lungs. If a patient begins to cough and pneumonia is suspected, the patient's temperature should be checked at least twice a day to ensure a fever does not develop. Thoracic radiographs can be taken to confirm pneumonia. If a patient is found to have pneumonia, treatment typically includes nebulization and coupage. Coupage is typically done when the patient is rotated but is contraindicated in patients with thoracic trauma. Pneumonia is a very serious complication related to recumbent patients.

Recumbent patients can benefit from the addition of physical rehabilitation into their treatment plan to aid in the prevention of respiratory dysfunction and pneumonia, as well as the prevention

of decubital ulcers. Therapeutic exercises and some modalities assist in preserving muscle strength and flexibility while the patient is convalescing.

Harnesses, slings, carts, and exercise balls are all devices that can be used to assist in physical rehabilitation. Some of the exercises that benefit the patient most require a significant amount of support from the care team. These devices aid in providing that support.

Assisting a patient to stand will slow muscle atrophy and improve respiratory health while removing pressure over the bony prominences. Standing also maintains muscle strength and tone and improves balance. This can be repeated three to six times a day. The patient may be unable to stand, even when assisted for long periods of time so rest breaks are important. The previously mentioned assistive devices will be useful during assisted standing.

While the patient is standing weight shifting and cookie stretches can be incorporated. Both exercises engage the core muscles and can maintain or improve balance and strength. Cookie stretches also aid in maintaining spinal flexibility through spinal flexion. Weight shifting is completed by swaying the patient side to side and front to back to encourage them to correct themselves. Cookie stretches are completed by encouraging the patient to flex to the side using a treat that is brought toward the level of the hip.

The use of thermal therapies can also be effective in reducing pain and inflammation. Cold therapy can be used during the acute phase of inflammation to decrease swelling and edema. Heat therapy can be used during the subacute and chronic inflammatory phase to promote circulation to local soft tissue and decrease muscle spasms.

The incorporation of manual therapies like massage, stretching, and passive range of motion allow joint and muscle stiffness to be addressed. Massage is used to increase blood flow to local tissues and provide sensory input to nerves among other uses. By manipulating the muscles and soft tissues, massage assists in maintaining flexibility. Changes to muscle length occur quickly in recumbent patients because of disuse. The muscles tend to shorten and through stretching, muscle length is maintained or increased. Passive range of motion also aids in preventing stiffness in joints by moving the joint through the normal range of motion. The movement through the range of motion prevents muscle and joint stiffness as well as decreases pain caused by the inflammation associated with disuse. While these manual therapies are beneficial in many ways, they do not effect muscle strength.

A form of active range of motion that can increase strength is the toe pinch. This exercise is used to re-educated nerves and assist in proprioceptive training. A gentle pinch is applied between the patient's toes to encourage them to pull away, thus moving their joints through a range of motion and causing the muscles to contract. The pinch should not be painful but should be a nauseous stimulus. A reward should be given following toe pinches.

More active exercises that promote functional abilities include lateral to sternal lays, supported sitting, sternal lay to sits, and assisted walking. These exercises all aim at returning a patient to function while maintaining and increasing the strength needed to return to ambulatory when possible. The exercises also remove pressure from bony prominences and aid in respiratory function. Lateral to sternal lays are completed by the patient laying in a lateral position and moving into a sternal laying position. Often assistance is needed to complete the exercise in the beginning. A hand can be placed under the down shoulder and as the patient rises to lateral, the care team member will assist in positioning. This exercise engages the core muscles. The supported sit exercise engages the core muscles and increases strength and balance. The patient is placed in a seated position and supported for five to ten seconds before resting. The sternal lay to sit is an exercise that encourages the patient to move from a sternal position into a seated position. Assistance is sometimes needed and the use of assistive devices is beneficial. This exercise is the step before the patient moves to exercises encouraging them to rise on their own. Assisted walking not only allows for increased strength and respiratory health, it also provides a way to improve functional ability. The use of assistive devices, and depending on the size of the patient, assistance from another care team member are beneficial if not necessary. This exercise allows for the patient to have a normal experience that is often beneficial to its mental health.

Electrical stimulation can also be utilized to increase muscle strength and minimize disuse muscle atrophy in recumbent patients. This modality contracts the muscles of the limbs through electrical current and produces a muscle contraction if the patient is unable.

There are many aspects of caring for a recumbent patient that must be considered when developing a care plan. While extra effort, time, and energy are required for their care, it is essential for the wellbeing of the patient. Observation and communication are key for a positive outcome when caring for a recumbent patient.

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