

Physical Rehabilitation in Geriatric Patients: If you rest, you rust!

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Abstract-

The purpose of this lecture is for participants to learn about using a multimodal approach to caring for geriatric patients to aid in their recovery and improve overall quality of life. The process of developing a physical rehabilitation plan that takes into consideration the limitations and special conditions that are often present in geriatric patients will be discussed, as well as nutritional and environmental needs of the patients. Available therapeutic modalities will be explained and cases will be presented to show examples of multimodal care in the geriatric patient.

Keywords: evaluation, considerations, multimodal approach, therapeutic modalities

Physical rehabilitation uses therapeutic exercises, modalities, devices, and training to aid in a patient's recovery following an injury or disability that impedes the patient's functionality. In Alabama the term physical therapy is reserved for human patients, while the term physical rehabilitation is used to describe care given to animal patients.

While the individual goals of a client may vary, the overall goals for geriatric patients are typically similar. Most owners want for their pets to be comfortable and have an improved overall quality of life. To assist with an improved quality of life, the patient needs to improve or maintain the current level of mobility. Occasionally, the patient will need assistance with weight loss to improve mobility, while also needing to improve muscle mass, tone, and balance. All of these goals are achievable to a degree with a complete physical rehabilitation program.

Evaluation of the patient is the first step in developing a physical rehabilitation program that is tailored to the individual patient. During the evaluation, the patient's body condition score (BCS), general appearance, mentation, stance and locomotion are observed. These observations allow for the patient to adjust to the evaluator and the environment before being examined. Once the patient is more comfortable with its surroundings, the examination can be completed. The examination includes a full neurologic and orthopedic exam, as well as an evaluation of the patient's joint range of motion, muscle tone and mass, any abnormalities that may be present. It is important to gather as much information as possible to develop a complete rehabilitation plan that considers the patient's home environment and the owner's goals. Communication is key to the outcome of any rehabilitation program.

Once the patient has been evaluated and a full medical history is obtained, there can be underlying health issues that should be considered when developing a rehabilitation program.

With geriatric patients, there is a greater likelihood that the patient will have pre-existing conditions such as osteoarthritis, obesity, thyroid or cardiac disease, or respiratory or neurologic dysfunction. There can be concurrent limitations in strength, stamina, and balance due to general aging and osteoarthritis. This is why it is important to use a multimodal approach to patient care, especially in geriatric patients.

There are six key components to a multimodal approach that include: pain management, weight management, nutrition, the treatment of pre-existing conditions, environmental concerns, and physical rehabilitation. By preparing a plan that encompasses all of these aspects of care, the care team is able to provide a strong foundation for patient recovery.

Pain management is key to a successful rehabilitation program because a patient's willingness to participate in exercises can be limited by pain. There are different combinations of medications that can be used including nonsteroidal anti-inflammatory medications and opioids, as well as including nutraceuticals to aid in joint health.

Weight management and nutrition go hand in hand with the overall health of a pet. Geriatric patients require fewer kilocalories than that of their younger counterparts. Proper diet calculation is essential to managing a patient's weight. When calculating the diet for the patient, it is important to include the kilocalories that are associated with treats that may be given to the pet. While diet calculations can be made for any food the pet is receiving, it is important to be aware of the varied nutritional needs of geriatric patients. The diets fed to geriatric patients should have adequate fat and protein with a higher fiber content.

Having a full medical history and being aware of pre-existing conditions is vital to developing a successful rehabilitation plan. All patients should be cleared for exercise by their veterinarian before starting a rehabilitation or exercise program. Certain pre-existing conditions can alter the therapeutic modalities available for treatment of certain patients. For example, a patient with cardiac disease or respiratory dysfunction will be limited in the use of aquatic therapies.

Furthermore, a history of neoplasia eliminates the use of therapeutic laser in patients because of the risk of inadvertently spreading cancer cells.

When evaluating a patient's home environment, it is important to consider flooring surfaces, the presence of stairs, food placement, bedding, and limitations the owners may also have. There are solutions for most of these issues, but it is important to keep them in mind when developing a plan. Knowing the environment the patient inhabits allows for the program to be tailored to the functional needs of the patient and owners.

There are a magnitude of physical rehabilitation modalities available to aid in the recovery of geriatric patients. The modalities include: thermal therapy, therapeutic exercises, aquatic therapy, therapeutic laser therapy, electrical stimulation, therapeutic ultrasound, shockwave therapy, manual therapies, and acupuncture. Depending on the patient, the goals of therapy, and pre-existing conditions a complete program will include some or all of these modalities. It is important to remember that there are contraindications for some modalities that could eliminate their use depending on the patient. Therapeutic exercises are typically the base of a rehabilitation plan and these exercises can be altered to meet the needs of the patient.

When developing a rehabilitation program, the history, physical evaluation, and goals will dictate the modalities and exercises chosen. It is important that a patient has rest breaks because of decreased stamina and that they enjoy the activities. A patient should never be overly sore following a rehabilitation session. When choosing therapeutic exercises, it is important to target specific muscle groups that are in need of strengthening.

As patients progress through the rehabilitation program, it is necessary to constantly re-evaluate their progress and changing needs. Formal re-evaluations should be done every two weeks to ensure muscle is being gained and weight is being lost, if needed. Communicating with the owners throughout the process is needed to gauge how the patient is doing at home.

Following the general information, two case studies will be presented. The first case is that of an overweight 12 year old mixed breed dog that had been diagnosed with osteoarthritis of the hips, stifles and elbows. The second is that of an 11 year old German Shepherd Dog that had been diagnosed with osteoarthritis of the hip, muscle atrophy, and spondylosis. These cases will discuss: the medical management of their symptoms, their evaluations, rehabilitation programs, and eventual outcomes.

Following the case studies there will be time for questions.

References-

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