PHYSIOTHERAPY FOR WILDLIFE

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Purpose

To briefly outline the scope of physiotherapy treatment options available for the treatment and rehabilitation of wildlife. My aim is to inform and develop an increased awareness and understanding of the different types of physiotherapy techniques, electrotherapy modalities and equipment that can be used for the benefit of wildlife in your care. This presentation is primarily directed to those who care for injured wildlife.

Introduction

Using human physiotherapy techniques to manage similar problems in Veterinary patients is not a new phenomenon, and it can be traced back to the early 20th century. There are physiotherapists who specialize in the treatment of non-human patients. Many of these specialist physiotherapists have undertaken post-graduate studies to apply their professional knowledge, experience and practical therapy skills and contributing to the much needed scientific evidence base for veterinary physiotherapy.

Physiotherapy Techniques

All these types of physiotherapy treatments have potential benefits and are important in the physical rehabilitation of wildlife but they need to be incorporated with a definitive diagnosis **and** individualized to the patient's treatment.

Main Aims of Physiotherapy Treatment

- Assist repair and healing
- Restore movement and function
- PREVENT or minimize dysfunction and/ or complications from the original injury e.g. contractures, limited movement, pressure areas, chest infections.
- Manage pain and discomfort

Soft Tissue Injuries

Basic principles of soft tissue healing, underlie all the different types of physiotherapy treatment for these types of injuries. An understanding of what is occurring in the different types of tissues at each stage of healing (injury, inflammation, repair and remodeling) enables selection of the most appropriate physiotherapy treatment and/or techniques e.g. inflammation stage requires treatment such as support

splinting and bandaging, to minimize swelling, which is counterproductive. When swelling has subsided, during repair and remodeling, gentle movements and mobilizations are appropriate, to minimize pathological adhesions.

Pain Management

Many physiotherapy treatments, not only assist repair and healing, but also assist in the management of pain

- Therapeutic ultrasound
- Support bandaging and/or splints
- Gentle passive movements
- Alternate repositioning

Types of therapy

1. Electrotherapy

Types

- Therapeutic ultrasound
- Transcutaneous Electrical Stimulation (TENS)
- Low-laser therapy (LLT)

Others types of electrotherapy include

- Pulse magnetic field therapy (less frequently used)
- Interferential therapy (less frequently used)

Uses.

- Fractures
- Soft tissue injuries eg sprains, ligamentous injuries, limited joint movement
- Manage pain
- Reduce swelling
- Neurological conditions eg spinal injuries causing sciatic nerve paresis
- Chronic conditions eg muscle wasting, osteomalacia/osteoporosis
- Musculoskeletal e. g. capture myopathy

2. Immobilisation – uses of splints

There many different types of splints and splinting materials. The type and materials used, depends on the purpose of the splint. For example splints can be rigid and not permit any type of movement OR they may be dynamic and permit a limited and selected degree and direction of movement. The range of splinting materials is ever changing as new products appear on the market. Cost may be a limiting factor. The splint should be appropriate for the purpose and the species being treated.

Types of splints.

- Fixed/Rigid
- Dynamic
- Splints with hinges
- Full splints/casts
- Half splints/casts OR even casts with zippers

Types of splinting materials.

- Waterproof material e.g. thermoplastic materials such as hexalite
- Non-waterproof such as plaster of paris or gypsona
- Padding or lining materials can be waterproof or absorbent
- Transparent or non transparent

Caution. There are potential dangers with inappropriate application.

Splints **must be;**

- fitted correctly ensuring that the part splinted is in the correct position or alignment e.g. fractures
- not too tight as to impair circulation, or too loose and slip or fall off!
- padded to avoid pressure resulting in tissue and nerve damage
- correctly bandaged to prevent swelling of the distal part.
- checked regularly by the treating veterinarian

3.Exercises

Exercises may be;

- Passive movements
- Assisted movements
- Active movements

Caution: When shown how to do exercises by your treating veterinarian it is important never to force movement when RESISTANCE is felt.

REMEMBER. Many of the animals we care for are like elite atheletes and need to be 'fit to return to their natural environment', therefore a period of graduated exercises/movements is necessary to overcome the deconditioning effect of their injuries e.g. penguins after an oil spill.

4. Supported Weight Bearing Positioning

Assisted weight bearing can be used to,

- Promote bone healing (fractures)
- Return to function from neurological problems
- Assist recovery from capture myopathy
- Encourage movement and muscle activity
- Increase tissue flexibility
- Improve proprioception

Conclusion

The rehabilitation of sick and injuried wildlife is multifaceted with physiotherapy treatments as one aspect of care, offering potential benefits to assist in restoration of movement and function and pain management, enabling the goal of a successful release to their natural environment to be achieved.