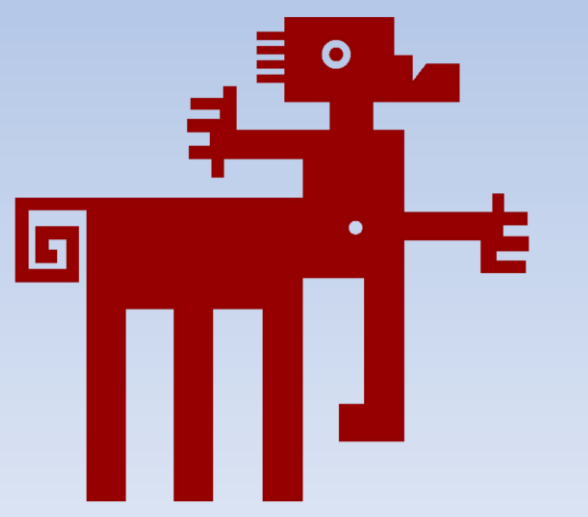


# APPLICATION OF REHABILITATION TECHNIQUES IN ORTHOPEDIC CONDITIONS: DESCRIPTION OF PROTOCOLS AND ASSESSMENT OF EFFICACY IN THREE SPECIFIC CLINICAL CASES



## INTRODUCTION

- Rehabilitation in orthopedic conditions is one of the most important areas in canine rehabilitation and plays an essential role in achieving successful recovery.
- It is essential to establish a personalized therapeutic plan.

## OBJECTIVES

- To provide an information database focused on the most commonly used techniques in orthopedic problems.
- To show a form of recovery and the effectiveness of the techniques through the follow-up of three clinical cases.

### CASE 1: Cranial cruciate ligament rupture

4 weeks post right TTA  
Osteoarthritis in both knees and lumbosacral spondyloarthritis

- Golden Retriever
- 8 years
- BCS: normal
- 2 walks/day

#### PROBLEMS

- Atrophy and decreased muscle strength
- Compensations in the anterior third
- Lumbosacral pain
- Decreased ROM in left knee

#### OBJECTIVES

- Decrease pain and inflammation
- Improve musculature and ROM

#### TREATMENT

- Manual therapy
- Underwater treadmill
- Laser for lumbosacral osteoarthritis
- Proprioception with balance disc

#### RESULTS

- ✓ Elimination of pain and inflammation
- ✓ Improvement of joint mobility
- ✓ Slight muscular asymmetry
- ✓ Difficulty in weight transfer due to osteoarthritis

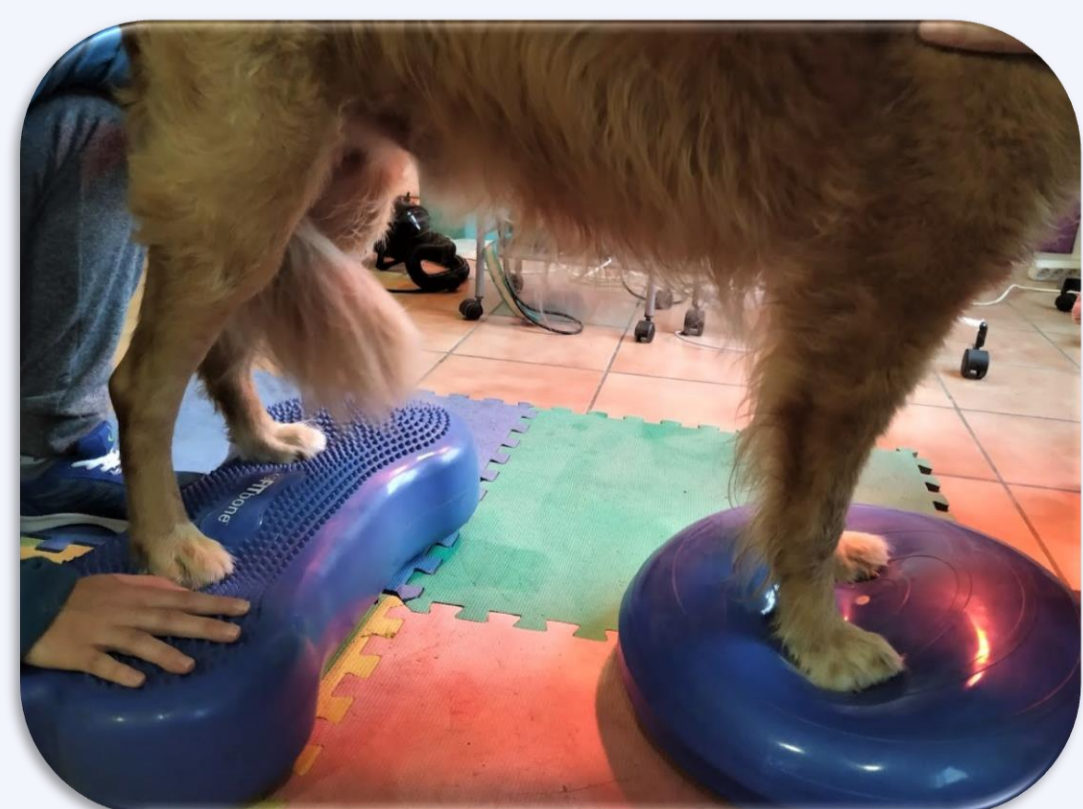


Figure 1. Proprioception on the balance disc.



Figure 2. Exercise on the underwater treadmill.

### CASE 2: Polyarthritis

Bilateral osteoarthritis in elbows, hips and knees for 4 years

- Labrador Retriever
- 9,5 years
- BCS: obesity
- 2 walks/day

#### PROBLEMS

- Moderate lameness
- Pain and crackles
- Compensations on the shoulders
- Decreased muscle strength
- Limited joint mobility

#### OBJECTIVES

- Control of pain and inflammation
- Maintain maximum functionality

#### TREATMENT

- Manual therapy
- Laser in elbows, shoulders, hips and knees
- Underwater treadmill

#### RESULTS

- ✓ Lameness removal
- ✓ Reduced pain
- ✓ Improved mobility



Figure 3. Pressure massage technique.

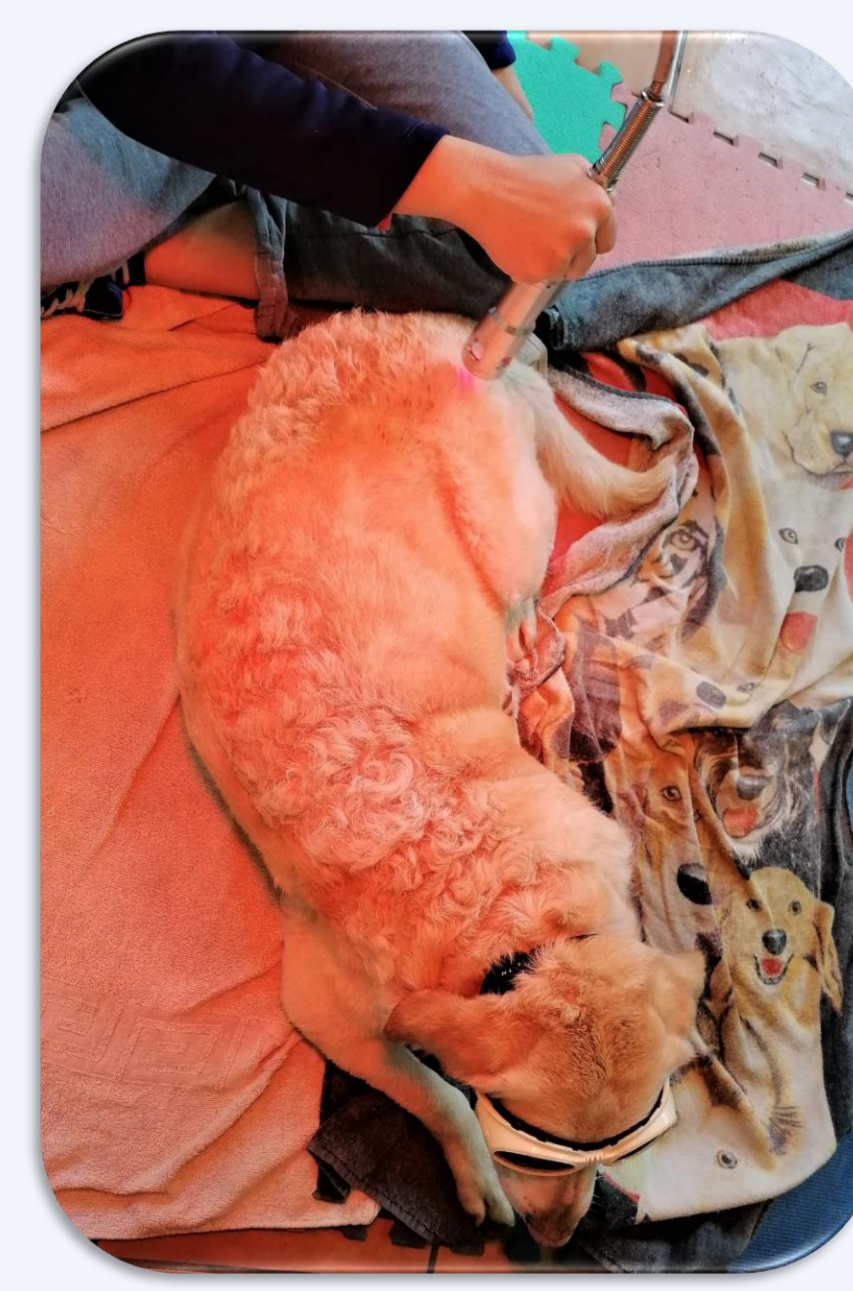


Figure 4. Laser therapy in the hip.

### CASE 3: Tarsal arthrodesis

Tibio-tarsal arthrodesis with an osteosynthesis plate

- Jack Russell
- 8 years
- BCS: normal
- 3 walks/day

#### PROBLEMS

- Absence of support of operated limb
- Atrophy and asymmetry muscular

#### OBJECTIVES

- Start supporting the limb as soon as possible
- Regain muscle strength and joint mobility

#### TREATMENT

- Manual therapy
- Treadmill
- Proprioception with balance disc
- Active walking exercises

#### RESULTS

- ✓ Moderate improvement of limb support
- ✓ Improved joint mobility
- ✓ Lack of musculature



Figure 5. Stretching of the hind limb.



Figure 6. Active ambulation work with bars on soft surface.

## DISCUSSION AND CONCLUSIONS

- Most techniques include pain and inflammation control, muscle strengthening and improvement of joint mobility. In all of them, the final goal is to regain the maximum functionality and improve the quality of life.
- Several factors that can have an impact in the recovery time and consequently delay the recovery process, are being taken into consideration. Physiotherapy should start as soon as possible to reduce lack of mobility.