Decubital ulcers, urine scald and muscle atrophy:
Nursing care and physical rehabilitation used to improve the prognosis for our non-ambulatory patients

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The “down dog” aka non-ambulatory

Non-ambulatory?
Neurologic Causes of Non-ambulatory Status

- IVDD
- Trauma
- Spinal Cord Injury
- FCE
- High Velocity Disc
- Neuromuscular
- Metabolic
- CNS Disease
- Neoplasia
- Vascular
- Encephalitis

Paresis vs Plegia

Paresis: weakness
- Movement
- Pain perception

Plegia: absence of any voluntary movement
- Pain perception?
- Reflexes?
Types of Paresis/Plegia

• Mono: One limb
• Para: Back limbs
• Hemi: One side
• Tetra: All 4

Complications

• Pulmonary atelectasis or pneumonia
• Bedsores and decubital ulcers
• Urinary bladder damage
• Urine scald
• Inadequate nutrition
• Muscle atrophy and joint stiffness
• Pain
• Patient (and client) depression

Development of an ulcer
Urine Scald

Muscle atrophy

Weight loss and muscle atrophy
Preventing complications associated with non-ambulatory patients

Bedding

- Thickness
- Substrate
- Cleanliness
Positioning

- Sternal (if possible)
  - Reduce atelectasis
- Head elevation
- Frequent turning
  - Every 4-6 hours

Bladder Dysfunction
Upper Motor Neuron Bladder Dysfunction

- Typical of T3-L3 lesions
- Tense, spastic bladder/sphincter
- May be unable to start urination or empty bladder
- Overflow incontinence

Lower Motor Neuron Bladder Dysfunction

- Typical of L4-S2 or peripheral neuropathies
- Decreased bladder and urethral tone
- Flaccid, easily expressed bladder
- Urinary incontinence

Urination Complications

- Pyelonephritis
- Atonic bladder
- Urine scald
How Do We Conquer Bladder Dysfunction???

- Manual expression

- Catheterization
  - Intermittent
  - Indwelling

- Medical therapy

Complications of Bladder Expression

- Bladder rupture

- Bladder wall damage

- Patient discomfort/anxiety

Bladder Expression Technique

- Lateral recumbency or standing
- Hands on either side, caudal to last rib
- Palpate abdomen, moving hands medial, dorsal, and caudal until bladder felt
- Steady even pressure (medial/caudal)
Catheterization

Reduces abdominal or bladder trauma

Useful in recumbent or critical patients

Ability to measure and characterize urine output

Indwelling or intermittent

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Catheterization Complications

UTI
  • 50% of dogs have UTI after 4+ days of catheterization
  • Aseptic placement and care

Urethral and bladder damage
  • Aggressive placement
  • Self trauma or accidents with closed systems

Bladder atony
Defecation Overview

When did Spike poop last?

Constipation not usually a problem

L4-S2 lesions - fecal incontinence

Fecal Expression

Rehabilitation

Hasten recovery

Range of Motion (ROM)

Passive

Active

Increased joint mobility
 Decreased tissue adhesions
 Increased circulation
 Muscle lengthening

Decreased muscle atrophy
 Increased lymph drainage
ROM Exercises

Begin 24 hrs after surgery or injury unless severe trauma or other contraindications.

5 to 15 minutes each limb q 4-8 hrs

Series of repetitive movements

Flexion and Extension
- Use care extending traumatized, geriatric or sensory deprived limbs

Massage

Increase circulation

Relaxation

Decrease pain

Loosen stiff muscles

Supported Walking

Slings

Wheelchairs – pelvic, thoracic or all 4

Decreases limb edema, atelectasis

Encourages voluntary movement, urination
Supported Walking

Complications
- Pedal ulceration
- Booties
- Worsening of unstable lesions
- Discomfort or anxiety
- Human injuries

Hydrotherapy

Most dogs (and some cats) love it
Low impact
Full range of motion
Resistance
Builds muscle