

PAIN ASSESSMENT IN CATS AND DOGS

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Accurate pain assessment is the cornerstone to appropriate and adequate pain management. Treatment of pain in animals historically has been neglected, one of the primary causes for this may be the difficulty in identifying and quantifying the intensity of pain in cats and dogs.

Challenges of pain assessment

Pain is subjective, dynamic and multidimensional. Due to variability in each animal's expression of pain, pain assessment in veterinary patients can be very challenging. Pain is an individual experience and individual patients may have markedly different analgesic requirements, even when subjected to what we expect to be similarly painful experiences. A stoic animal in which pain is suspected but difficult to identify should be still treated appropriately, especially if the procedure or disease warrants it. Pain in animals is also complicated by survival characteristics, dogs and cats mask their pain as a protective mechanism such as a dog experiencing pain may still wag its tail.

Assessment of acute pain in small animals

Scoring tools such as identification and recording of behavioral changes and responses to therapy are useful for standardizing pain assessment. Quantifying the amount of pain animals experience can help us to be more responsive to the analgesic needs and employ alternative strategies if required. Most pain scales have been used to assess acute postoperative pain in dogs and cats. When choosing a pain scale to use in practice it should be: user friendly, reliable in a clinical setting, quick to complete and readily used by all personnel involved in the patient care.

- No "gold standard" exists to assess pain in animals.
- Physiological signs such as increased heart rate, increased blood pressure, or dilated pupils may be manifestations of pain or stress but should not be relied on as the sole indicators of pain.
- Preemptive scoring systems assign a degree of pain based on the procedure performed and the amount of tissue trauma involved. In general, the greater the amount of tissue trauma, the greater the assigned level of pain. The advantage of the preemptive scoring systems include their simplicity, however they are not useful in determining the degree of pain felt by an individual patient.
- Simple descriptive (SDS) and numerical rating scales (NRS) and visual analogue scales (VAS) have all been used in small animals to quantify pain. These scales are simple to use, but high observer variability affects accuracy.
- Multiparametric scales or composite scales allow repeatable pain assessment from different evaluators. Commonly used examples are:

CSU Acute Pain Scale

Colorado State University have produced feline and canine pain scales which encompasses psychological and behavioral elements, response to wound palpation and body tension. Which can be downloaded from:

http://csuanimalcancercenter.org/assets/files/csu_acute_pain_scale_feline.pdf

http://www.csuanimalcancercenter.org/assets/files/csu_acute_pain_scale_canine.pdf

The advantage of the CSU pain scale is its ease of use with minimal interpretation required. The primary disadvantage is lack of validation by clinical studies and that it primarily addresses acute pain.

Glasgow Composite Measure Pain Score – Short Form

The GCMPS-SF is a scale based on specific behavioral signs believed to represent pain in the dog. The short form was designed as a clinical decision-making tool developed for dogs in acute pain. There are 30 descriptor options within 6 behavioral categories, including mobility. The descriptors are ranked numerically according to pain severity and the person performing the assessment chooses the descriptor which best describes the dog’s behavior. The pain score is the sum of the scores, the maximum score for 6 categories is 24 (20 if mobility cannot be assessed). The recommended intervention level is 6/24 or 5/20.

The CMPS-SF can be downloaded from:

<http://www.gla.ac.uk/schools/vet/research/painandwelfare/downloadacutequestionnaire/>

UNESP-Botucatu Multidimensional Composite Pain Scale for assessing postoperative pain in cats
The UNESP-Botucatu MCPM is similar to the GMPS-SF a pain score using 10 different categories to assess acute pain in cats. More information and the form can be downloaded from:

<http://www.animalpain.com.br/en-us/escala-multidimensional.php>

Subjective evaluation of pain based on behavioral changes is still widely used for assessment of acute pain in cats and dogs.

Some clinical signs indicating pain:

Signs of Pain in Dogs	
Category	Clinical Signs
Attitude/Mentation	<ul style="list-style-type: none"> • Scared, submissive appearance • Depressed, unwilling to interact with people • Aggressive
Activity	<ul style="list-style-type: none"> • Restless - inability to lay down • Constant trembling with/without stimulation • Flinching from slightest touch
Facial Expression	<ul style="list-style-type: none"> • Tense facial muscles with furrowed brows • Lips drawn back • Unfocused stare • Fearful look in eyes • Ears flattened against head • Dilated pupils
Guarding	<ul style="list-style-type: none"> • Guarding painful area • Biting painful area • Tensing abdomen when palpation is attempted • Growling when approached
Posture	<ul style="list-style-type: none"> • Hunched up or tense appearance (back, abdominal pain) • Prayer position: standing on hindlimbs, with sternum and forelimbs flat on floor (severe abdominal pain) • May move to back of cage
Vocalization	<ul style="list-style-type: none"> • Crying, wining, whimpering

Signs of Pain in Cats

Category	Clinical Signs
Attitude/Mentation	<ul style="list-style-type: none"> • Changes in attitude/personality – act out of character • Unwilling to interact with people • Aggressive • Stupor • Anxiety • Absence of normal behavior (grooming)
Activity	<ul style="list-style-type: none"> • Inappropriate activity level - restless • Sitting in the back of the kennel • Reluctant to move • Remains in same body position
Facial Expression	<ul style="list-style-type: none"> • Staring, fixed gaze • Squinty eyes – furrowed brow • Ears flattened against head • Dilated pupils
Guarding	<ul style="list-style-type: none"> • Guarding painful area • Biting, licking painful area • Tensing abdomen when palpation is attempted • Growling when approached
Posture	<ul style="list-style-type: none"> • Remains in same position for long periods of time • Stiffly sits sternal, with head tucked under • If curled up, may have stiff “hunkered down appearance” • Rigid, tense
Vocalization	<ul style="list-style-type: none"> • Hissing, growling, meowing, purring

Key factors for pain assessment

1. The assessment begins with quiet observation at a distance, take time to assess the animal’s body posture and facial expression.
2. The patient is approached to assess response to handling, including gentle palpation of the surgical site.
3. The experience of pain is individual.
4. The patient’s response should be evaluated repeatedly.
5. Response to therapy is an appropriate and important tool in pain assessment.
6. If a clinician/technician considers an animal is in pain when the pain scoring system used (pain scale) indicates otherwise, the benefit of the doubt should apply and the animal given intervention analgesia.

References

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4. Brondani JT, Luna SPL, Padovani CR. Refinement and initial validation of a multidimensional composite scale for use in assessing acute postoperative pain in cats. AJVR 2011; 72:174-183.
5. Online practice videos for Pain Assessment in cats:
<http://www.animalpain.com.br/en-us/avaliar-sua-habilidade.php>