Pain management is essential to patient welfare, successful case outcomes, and client satisfaction (Taylor and Robertson 2004). Although pain management in cats has lagged behind that of dogs, identifying that behavior is the key to recognizing pain in cats, and advances in prevention and treatment of feline pain can now be incorporated into each veterinary practice.

**Recognizing Pain Through Behavior**

*Clients Recognize Pain More Accurately in Their Cat*

Changes in an individual cat’s behavior are the best method to identify pain in the cat (Taylor and Robertson 2004). Because the cat owner knows their cat and its normal behaviors better than anyone, it is important to include them as an integral part of the healthcare team when it comes to recognizing pain (Sparkes et al. 2010). Changes can be either changes in normal behavior(s) or a start of a new, but abnormal, behavior for an individual cat (Sparkes et al. 2010; Robertson and Lascelles 2010; Benito et al. 2012; Lascelles et al. 2008; Bennett 2012).

Studies indicate that clients can often identify pain in their own pets more accurately than veterinarians can (Robertson and Lascelles 2010; Benito et al. 2012; Lascelles et al. 2008). Unfortunately, they often consider the changes to be associated with “old age” rather than pain or illness.

*Veterinary Teams and Pain Recognition and Assessment*

A comprehensive approach to identifying pain includes every member of the healthcare team, in addition to the client. All team members should be educated to recognize pain, and client education for early pain recognition is critical as well. Changes in behavior and behavior problems are the most important signs; although the signs may also be associated with other conditions, pain must be assessed when they are noted.

**Body Posture**

Other signs include changes in body or facial posturing. The body may be hunched in pain. A common facial posturing in acute pain is squinted eyes (Hellyer et al. 2007).

**Mobility**

Changes in movement may be the easiest signs to notice. However, most cat owners consider these to be normal aging changes instead of signs of degenerative joint disease. These include stiffness upon wakening, legs that tremble or shake, being “down” in hocks or carpi, or a decrease in overall mobility. A common sign seen is the cat who wants to jump but hesitates, standing in position as if it is readying itself to jump, but is thinking about whether it is worth the discomfort or effort.

**Pain Scoring**

Pain scoring should occur in all patients. There is now a validated acute pain scale for cats, and pictures and videos are available to go with that scale (Brondani et al. 2011; Hellyer et al. 2007). A score that is more readily usable is also available (Marshall et al. 2010), and Dr. Lascalles is developing a feline chronic pain scale.

**Preventing Pain**

*Handling Feline Patients to Prevent Pain*

Because it is difficult to recognize pain, even before it is diagnosed it is important to handle each and every cat, regardless of age, as potentially having pain. Since anxiety can exacerbate pain, allow the cat to hide in the bottom half of the carrier or a cat bed brought from home. Use gentle and respectful handling techniques. Nonskid surfaces prevent slipping. Allow the cat to be where it wants to be and as comfortable as possible throughout the examination.

Start the examination from a distance to assess body posture, stance, and gait. If possible, entice the cat to walk, but do not force it to do so. Usually the best way to assess gait is at the end of the appointment by placing the cat at the opposite end of the room from the carrier and watching the cat go to its carrier.

Examination should start with the least painful parts of the examination, and obtaining heart and respiratory rates as well as blood pressure prior to joint palpation improves accuracy of these results. If pain is noted at any time before
or during the physical examination, stop and give analgesia, and examine the non-painful areas and collect lab samples prior to further assessing the painful areas. Transmucosal or intramuscular buprenorphine is an excellent analgesic in this situation.

**Weight Optimization and Prevention of Dental Disease**
Preventive veterinary care can help prevent pain in the majority of our feline patients. Preventing dental disease, the most common condition seen in cats, prevents oral pain. Client education for home care and medical treatment to prevent dental disease is an excellent and cost-effective plan.

Obesity, the second most common condition in owned cats, exacerbates discomfort to joints. We know that weight optimization alone helps reduce pain in people and dogs with degenerative joint disease (DJD) (Marshall et al. 2010), and it is likely that this is true in cats as well.

**Perioperative and “Periprocedure” Analgesia**
Systemic and local analgesics, including opioids and local and topical analgesics are part of analgesic protocols in feline surgical and dental patients. There are also many procedures that deserve analgesia prior to procedure, which include anal gland expression, manual extraction of stool, ear cleaning, and radiographs. A complete list can be found in the 2007 AAHA-AAFP Pain Management Guidelines.

**Home Environment**
Many cats have DJD, and other cats may have difficulty getting to favored locations because of other medical problems. Providing ramps or steps to get to favored places and placing food, water, and litter in easily accessible places will allow cats to continue to perform their normal behaviors.

**Treat Pain**

*Favorite Feline Drugs*
Opioids are commonly used for prevention and management of acute pain, as well for flare-ups of chronic pain, and palliative care. They are often used preoperatively in conjunction with other medications. Buprenorphine is commonly used in cats, and should be given either transmucosally, intramuscularly, or intravenously (Robertson et al. 2005).

Nonsteroidal anti-inflammatory drugs (NSAIDs) are the mainstay for management of chronic pain. Many studies have indicated its chronic use in cats despite NSAIDs not being approved for long-term use in cats in the United States.

Local anesthetics should be used with surgical and dental procedures as one of the modalities to prevent pain. Gabapentin is routinely used in people with neuropathic or maladaptive pain. The author routinely uses gabapentin in cats with diabetic neuropathy and amputations and frequently for degenerative joint disease. Studies indicate that when used with caution—examination, diagnostics, instructions to stop the medication if anorexia or vomiting occur, and regular follow-up— gabapentin increased the comfort and activity of the feline patients. Its use in lower doses in cats with chronic kidney disease did not reduce lifespan (Gowan et al. 2012).

**Degenerative Joint Disease**
DJD is a very common condition in cats that impacts quality of life and the relationship owners have with their cats. However, it is frequently unrecognized and underdiagnosed. In one random study of cats in different age groups, 91% of 100 cats had radiographic evidence of arthritis, occurring as early as six months of age, and occurring with equal frequency in all age groups (Lascelles and Robertson 2010). Signs appear to worsen with age (Bennett and Morton 2009).

Patient history and owner awareness are critical steps to recognize DJD and to help assess response to treatment. Since changes in behavior are the most common sign, and owners know their cats better than anyone, owner input is integral to recognizing whether their cat is jumping as high, climbing steps as previously, or hesitates to jump. Since most cat owners think their cat is just “getting old,” our task, therefore, is to educate owners that behavior changes, even subtle, can indicate pain or illness.
The signs of DJD pain in cats are subtle because of the cats’ tendency to hide pain as a protective mechanism. Additionally, as opposed to the dog, most cats with DJD don’t limp because the disease is bilaterally impacting the same joints (Bennett and Morton 2009). Concurrent conditions occur frequently, and were found in 44% of cats affected with DJD in one study (Klinick et al. 2012). Cat owners think their cats are “just getting old,” and the common signs that dogs have don’t occur in cats.

Behavioral signs of pain are either loss of normal behaviors, development of new or different behaviors for that individual cat, or abnormal behaviors (See Table) (Bennett and Morton 2009). Decrease or loss of normal behaviors are the most concerning for owners and include decreased mobility and a decline in grooming due to stiffness and pain. Toileting outside the litter box can occur because of the challenges to get to the box that is often in the basement or hidden or raised so that a dog won’t dine on its “tasty treats.” Changes in behavior or abnormal behavior can occur with many other conditions, making it difficult to identify the underlying cause.

DJD includes joint degeneration of either synovial (appendicular) or cartilaginous (intervertebral disc) joints (Lascelles et al. 2010). Feline DJD occurs in both the spine and the appendages. Spinal or axial DJD is more frequently found between thoracic vertebrae T7-T10, but the lumbar vertebrae are affected more severely. Axial DJD increases with age (Lascelles and Robertson 2010). Lumbar spondylosis previously was considered an incidental finding, but it can be very painful. The more commonly affected appendicular joints are the hips, elbows, knees, and hocks. As opposed to axial DJD, appendicular occurs equally through all ages (Lascelles and Robertson 2010).

Although many cats have radiographic evidence of DJD, changes on radiographs do not equate with pain. Additionally, cats that have early DJD without obvious radiographic changes consistent with DJD can also be painful. This makes owner input even more important.

Changes in jumping, going up and down stairs, and hesitation to jump or climb are signs that owners should watch for in addition to all other behavior changes noted in Table 1. Letting owners know that purring is often used to comfort self, and can occur in painful cats, is also advised.

The mainstay of DJD treatment in cats is NSAIDs. Other medications are also used in cats. Environmental management is an important supportive measure including providing easy access to litter boxes, resting areas, and other favored spots.

<table>
<thead>
<tr>
<th>Table 1. Behavioral Signs of DJD in Cats</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Changes in the normal behavior of that individual cat</strong></td>
</tr>
<tr>
<td>- Appetite</td>
</tr>
<tr>
<td>- Decline</td>
</tr>
<tr>
<td>- Sleep/rest</td>
</tr>
<tr>
<td>- Increase sleep or restlessness</td>
</tr>
<tr>
<td>- Grooming</td>
</tr>
<tr>
<td>- Matting due to decreased grooming or overgrooming of the painful area</td>
</tr>
<tr>
<td>- Play</td>
</tr>
<tr>
<td>- Decreased</td>
</tr>
<tr>
<td>- Toileting behavior</td>
</tr>
<tr>
<td>- Difficulty getting into litter box</td>
</tr>
<tr>
<td>- Change in position in box or toileting next to box</td>
</tr>
<tr>
<td>- Constipation</td>
</tr>
<tr>
<td>- Activity</td>
</tr>
<tr>
<td>- “Slowing down” or “getting old”—most common signs noticed by owners</td>
</tr>
<tr>
<td>- Jumping and height of jump</td>
</tr>
</tbody>
</table>
• Going up and down stairs
  • Mobility
    o Stiff, may be only when rises
    o Lameness—not common
  • Disposition or attitude
    o Irritable: “grouchy” or “grumpy”
    o Clingy
  • Interactions with people or other animals
    o Withdrawn or avoid others
    o Attention-seeking
    o Irritable to aggressive with handling
  • Body posture
    o Hunched
    o Stiff
    o Not curled up normally when sleeping
    o Neck stretched out and head lowered
  • Facial expression—fixed gaze, dilated pupils, squinted eyes if acute pain (flare-up)
  • Vocalization
    o More or less vocal
    o Purring can occur even if painful

Behavior problems

• Inappropriate urination
• Inappropriate defecation
• Cat-to-human aggression
• Inter-cat aggression

References

