

Treatment of pain in dogs and cats

Peter W. Hellyer, DVM, MS, DACVA

The current state of pain management in dogs and cats is uneven at best, ranging from the excellent use of pain control techniques by some veterinarians to the complete disregard of pain control by others. Over the last decade, incredible gains have been made in our understanding and treatment of pain in animals, yet it is estimated that few animals under veterinary care receive adequate pain control. Considering what is currently known about pain and the resources available to veterinarians, an important question remains: Why do so many dogs and cats suffer needlessly? This article will provide a brief overview of some of the exciting advances that have occurred in the treatment of pain in dogs and cats as well as some of the existing barriers that hinder the treatment of pain by veterinarians.

There is ample evidence pointing to a heightened awareness and treatment of pain in companion animals by the veterinary community. Scientific and review articles dealing with a range of topics related to pain in animals are commonplace in the veterinary literature. Similarly, lectures and workshops on the recognition and treatment of pain in animals are commonplace at veterinary continuing education programs within North America. The American College of Veterinary Anesthesiologists (ACVA) has acknowledged that the prevention and alleviation of pain in animals is a central guiding principle of practice, as evidenced by the ACVA *Position Paper on the Treatment of Animal Pain*.¹ Importantly, the AVMA Executive Board adopted the following position statement in April 2001: "The AVMA believes that animal pain and suffering are clinically important conditions that adversely affect an animal's quality of life. Drugs, techniques, or husbandry methods used to prevent and control pain must be tailored to individual animals and should be based, in part, on the species, breed, age, procedure performed, degree of tissue trauma, individual behavioral characteristics, degree of pain, and health status."² The AVMA's position statement is consistent with the veterinarian's oath in which veterinarians vow to work toward the relief of animal suffering, acknowledges the complexity of treating pain in animals, and makes it clear that veterinarians must address pain in their patients. The American Animal Hospital Association (AAHA), long considered a leader in the promotion of high-quality veterinary care for small animals, is now considering the topic of pain management by its member practices.³

The didactic and clinical teaching of pain management occur to one degree or another in veterinary schools within North America. In what may prove to be a blueprint for future teaching, Pfizer Animal Health sponsored a conference in 2001 for veterinary clinical

educators from all the North American veterinary colleges. The goal of the conference was to determine what pain-related topics should be taught in the ideal veterinary school curriculum. That conference was a testimony to several important observations and trends: 1) there exists a broad base of support both inside and outside of the academic community for improving the education of veterinary students in the recognition and treatment of pain and 2) topics given a priority within the veterinary school curriculum tend to influence the clinical perspective of new graduates. The deficit of formal training in the treatment of pain by medical schools has been cited as a leading cause of physicians' inadequate treatment of pain in people.^{4,5} Anecdotally, some older veterinarians have stated that they were never taught about pain management while in veterinary school; consequently, they may not be comfortable with evaluating and treating acute postoperative pain in animals.

Despite this heightened awareness that pain in animals is important, deficiencies remain. One of the first studies that indicated the veterinary academic community lacked compassionate care of small animal patients was the study by Hansen and Hardie⁶ on use of analgesics in dogs and cats following major surgery in a veterinary teaching hospital. In that study, medical records were evaluated from 258 animals that underwent major surgery. Results indicated that only one of 15 cats received any postoperative analgesia, and that only happened one time. Of 243 dogs, only 46 (19%) received analgesia for more than 8 hours. Attitudes toward the treatment of pain in small animals have changed greatly at veterinary teaching hospitals since the time of that study; nevertheless, far too many dedicated veterinarians continue to find it acceptable to ignore pain in their patients. An accurate estimate of the number of US veterinarians that aggressively treat pain in small animals is not currently available. Anecdotal evidence from talking with practitioners, new graduates, and students would suggest that the percentage is fairly low. Clearly, a nationwide survey of veterinarians is needed to assess the current state of pain management by the profession.

A small number of recent surveys of veterinarians provide some insight into commonly held beliefs and practices over the past decade. However, the field of pain management in veterinary medicine has been changing so rapidly over the past decade that it is possible these surveys are no longer accurate. Veterinary students, clinical faculty, and staff at Colorado State University were asked to complete a survey⁷ evaluating attitudes regarding pain management in animals. There was a high degree of agreement regarding the overall importance of pain in animals in the 357 out of 720 surveys completed. In fact, 100, 93, 78, and 96.7% of faculty, staff, house officers, and students, respectively, indicated that "animals experience pain much the same

From the Department of Clinical Sciences, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO 80523.

way people do.” Despite this, there was a wide variety of opinions regarding the extent to which pain should be relieved and the clinical circumstances in which pain should be addressed. Those results suggested that the recognition and treatment of pain in animals were not uniform at a veterinary teaching hospital. In a recent survey⁸ of British veterinarians, approximately 30% agreed with the statement “A degree of pain is required to stop the animal being too active post surgery.” That statement reflects a somewhat dated yet pervasive view of pain in animals following surgery. Considering that most small animals often sleep following surgery if pain is managed effectively, the philosophy of keeping animals painful to prevent movement after surgery does not make a lot of sense and is inconsistent with good medicine. Paradoxically, in that survey of British veterinarians, 95% agreed with the statement “Animals benefit from perioperative analgesic therapy,” and approximately 85% agreed with the statement “Owners are happy to pay for the costs involved in giving analgesics.” Whereas a significant number of British veterinarians surveyed considered the use of a nonsteroidal anti-inflammatory drug or an opioid for the treatment of surgical pain, few veterinarians administered combinations of different classes of drugs in the perioperative period. Considering that combining analgesic drugs from different classes is the cornerstone of current philosophies of effective pain management, these results suggest that current techniques are not becoming widely adopted in private practice. Supporting the assertion that philosophies about pain in animals are changing, women and more recent graduates were more likely to assign higher pain scores to certain surgical procedures and were more likely to administer analgesic drugs for the treatment of pain, as indicated in the aforementioned survey. Additional evidence regarding the use of analgesics by veterinarians comes from surveys^{9,10} of Canadian veterinarians. Results indicated that 49.5% of veterinarians administered analgesics and that veterinarians tended to use analgesics in all postsurgical patients or not at all. Additionally, veterinarians indicated that analgesics were not administered to 16% of dogs and 30% of cats undergoing orthopedic surgery, 24% of dogs undergoing cruciate repair, 52% of cats undergoing onychectomy, and 62% of dogs and 56% of cats undergoing abdominal surgery (nonovariohysterectomy). Considering the degree of tissue trauma and pain associated with those surgeries, that survey was another indictment on the veterinary profession’s record of compassionate care. As with the British survey, the Canadian surveys revealed that women veterinarians and veterinarians that graduated within the last 10 years from veterinary school assigned greater importance to postoperative pain in animals. Veterinarians that treated dogs and cats > 75% of the time, worked with an animal health technologist, and had attended continuing education within the last 12 months also often placed a higher importance on the treatment of postoperative pain in animals.¹⁰ A survey¹¹ of animal health technicians in Canada suggested that unfamiliarity with the adverse effects of analgesic drugs contributes to inadequate treatment of pain in animals.

Although the technicians had higher pain perception scores than did veterinarians, a majority (55%) agreed that risks of potent opioids (morphine or oxymorphone) outweighed the analgesic benefits. The unfortunate aspect of those results is that they demonstrate a widespread reluctance to use some of the most effective drugs available (opioids) for the treatment of acute postoperative pain. Overall, this small sampling of surveys suggests that veterinary medicine is making advances, albeit slowly, in the areas of pain management.

Comparing veterinary medicine to human medicine may lead to erroneous conclusions; however, there are some interesting parallels in the areas of pain management. Recently, the **Joint Commission on Accreditation of Healthcare Organizations (JCAHO)** mandated that human hospitals must proactively address pain in patients.¹² In fact, the JCAHO has adopted a position in which pain is elevated to the fifth vital sign that needs to be monitored and treated with the same vigilance as blood pressure, pulse, temperature, and respiratory rate. The actions of the JCAHO place the responsibility for pain management on the healthcare organization, indicating that “appropriate pain management is good medicine because it results in quicker clinical recovery, shorter hospital stays, fewer readmissions, and improved quality of life, leading to increased productivity.”¹² This action was taken largely because of the widespread failure of physicians to effectively address pain in their patients despite numerous attempts to rectify the problem.¹³ In fact, the undertreatment of pain in people by the medical community has been known for almost 30 years, ever since the landmark study published by Marks and Sacher.¹⁴ The JCAHO cited a number of barriers or shortcomings of current pain control efforts that are the result of physician’s attitudes (interest, open-mindedness or lack thereof, sense of personal priority) or aptitudes (knowledge and skills).¹² Other barriers to the treatment of pain that have been identified include other institutional responsibilities impinging on time, colleagues’ poor assessment of pain, and patients’ fear of addiction ranking as the highest barriers by physicians.¹³ There is no doubt that many of these same barriers exist in veterinary medicine.

Borrowing from the human medical experience, it is clear that barriers to pain control can persist in veterinary medicine for generations unless a concerted effort is made to foster new ways of thinking about pain. As mentioned, considerable advances have been made in veterinary medicine. Nevertheless, more needs to be done. The long-held tradition of minimizing the importance of pain in patient management may be rooted in the development of modern scientific approaches to medicine.^{15,16} The experience of pain will always be an individual (ie, subjective) experience that does not lend itself easily to accurate or objective measurement by an outside observer. Downplaying the art of medicine in favor of the science (objective measurable parameters) has helped to create a clinical culture in which well-meaning individuals can ignore or minimize the importance of pain in their patients. It has become clear that veterinarians are morally and med-

ically obligated to address issues of pain in our patients and that the paradigm shift that has begun must continue.

Creating an environment in which animal pain is consistently and seriously addressed will take the efforts of numerous groups with interests in veterinary medicine. Some specific suggestions for improving pain management include the following:

- 1) As mentioned, the AVMA has recently adopted a position statement on the treatment of pain in animals. This is a good start. If we consider pain management to be part of practicing good medicine, this should become second nature for all veterinarians. Nevertheless, it is especially important that the specialty colleges take a leading role in furthering our knowledge and treatment of animal pain. For example, the American College of Veterinary Surgeons and the American College of Veterinary Internal Medicine, specialists who are frequently involved with painful patients, do not currently have position statements on the treatment of animal pain. These colleges are encouraged to set high standards for the treatment of pain by their diplomates and to formally recognize those standards through the development of meaningful position statements.
- 2) There exists a need for the faculties at the colleges of veterinary medicine to uniformly embrace a philosophy of providing the best pain management and medical care possible for the animals treated at the veterinary teaching hospitals. Although the universities have traditionally been at the forefront of pain management, it is clear from talking with colleagues that there is room for improvement at many of the teaching hospitals. Adopting a philosophy in which pain is considered the fourth vital sign (temperature, pulse, respiration, pain) will help to instill the importance of pain in everyone involved in veterinary teaching programs.
- 3) The AAHA is commended for discussing the organization's role in promoting effective pain management in its participating clinics. Strongly endorsing a philosophy that pain management is good medicine will go a long way toward elevating the quality of care in private veterinary practice.
- 4) The various humane societies that function nationally and internationally to improve the treatment and life of animals are commended for their tireless efforts. Nevertheless, those organizations are challenged to examine the treatment of acute pain in the animals under their care. Humane societies need to ensure that all animals under their care, whether being treated for trauma or undergoing surgical procedures, are provided adequate analgesia. If an organization is willing and able to pay for elective surgical procedures such as castration and ovariectomy, they should also be prepared to pay for adequate pain relief following those surgeries.
- 5) There exists a need for allocation of private, federal, state, and university monies to research in the area of pain management in animals. Despite all

the advances made to date, numerous questions remain. Creating species-specific and useable pain scales for different types of pain (eg, acute, chronic, surgical, medical) will greatly assist veterinarians in deciding whether their patient is painful and if the course of treatment is having the desired effect. For example, some of the behaviors cats have when in pain are quite different from those in dogs. No gold standard exists for identifying and measuring pain in animals, making it exceedingly difficult at times to tailor analgesic therapy to the individual animal. A proactive approach to pain management incorporates a philosophy of administering analgesics to any animal that has experienced trauma or a medical procedure that would more than likely be painful in people.^{17,18} Although this is a useful approach for the treatment of acute postoperative pain, it is less useful for treating other types of pain. In addition, assessing behavioral changes of animals in pain should ultimately be used to determine whether pain is being controlled in the patient and whether activity is returning to normal. Virtually all of the attention paid to the treatment of pain in animals by veterinarians has focused on physical pain. McMillan^{19,20} has alerted the veterinary community to the fact that emotional pain and health are important components of overall health that have been largely ignored to date. There is no doubt that research into the clinical management of emotional and physical pain is needed. Further research needs to be performed on the various analgesic drugs currently available, as well as new ones as they become available. Current data on optimum dosing schedules, incidence of adverse effects, and useful drug combinations for various types of pain are limited, and much of these data are anecdotal.

- 6) It is imperative that the federal Drug Enforcement Administration and state pharmacy boards work with veterinarians to decrease the burden and fear factor of administering and prescribing controlled (scheduled) drugs for dogs and cats in pain. Mild pain can often be alleviated successfully with the use of nonscheduled drugs such as nonsteroidal anti-inflammatory drugs, α -2 agonists, and local anesthetics. In contrast, animals that are moderately to severely painful usually require a course of opioid analgesics to control pain. The process of obtaining, using, and prescribing these drugs for legitimate purposes should not be associated with undue burden.
- 7) Clients may play an important role in determining the level of pain management for their pets in a couple of ways. First, pet owners need to be advocates for their pets to ensure that pain control is part of their overall treatment following an injury or surgery (just as injured or sick people need advocates for them in the human medical field). Pet owners should be willing to have open discussions with their veterinarian concerning the degree of pain their animal is experiencing and the steps being taken to alleviate that pain. Importantly, clients need to be willing to question their veteri-

narian just as they would question their family doctor. In addition, clients need to recognize that effective pain management is always tailored to the individual animal. A standard course of analgesic therapy may prove to be effective, excessive, or ineffective, depending on the individual. Clients need to be willing to work with their veterinarian to find the most successful way of treating their pet. Secondly, clients need to recognize that good quality medical care costs money. For example, price shopping by clientele for the lowest priced surgeries available may prevent some veterinarians from expanding their services to include effective pain management. Although price will always be an important factor in the delivery of veterinary care, clients need to be aware of the fact that the lowest price is not always the best deal for their pet.

The potential to improve our understanding, recognition, and treatment of pain in animals under veterinary care is great. It is my hope that meetings such as the AVMA Animal Welfare Forum will be a call to action for the veterinary profession as well as the pet owning public to make the prevention and treatment of pain in dogs and cats a high priority.

References

1. American College of Veterinary Anesthesiologists' position paper on the treatment of pain in animals. *J Am Vet Med Assoc* 1998;213:628-630.
2. AVMA adopts position regarding animal pain. *J Am Vet Med Assoc* 2001;218:1694.
3. Nolen RS. AAHA president to focus on practice efficiency, pain management guidelines. *J Am Vet Med Assoc* 2001;218:1402-1403.
4. Hill CS Jr. When will adequate pain treatment be the norm (edit)? *JAMA* 1995;274:1881-1882.
5. Wilson JF, Brockopp GW, Kryst S, et al. Medical students' attitudes toward pain before and after a brief course on pain. *Pain* 1992;50:251-256.
6. Hansen B, Hardie E. Prescription and use of analgesics in dogs and cats in a veterinary teaching hospital: 258 cases (1983-1989). *J Am Vet Med Assoc* 1993;202:1485-1494.
7. Hellyer PW, Frederick C, Lacy M, et al. Attitudes of veterinary medical students, house officers, clinical faculty, and staff towards pain management in animals. *J Am Vet Med Assoc* 1999;214:238-244.
8. Capner CA, Lascelles BDX, Water-Pearson AE. Current British veterinary attitudes to perioperative analgesia for dogs. *Vet Rec* 1999;145:95-99.
9. Dohoo SE, Dohoo IR. Postoperative use of analgesics in dogs and cats by Canadian veterinarians. *Can Vet J* 1996;37:546-551.
10. Dohoo SE, Dohoo IR. Factors influencing the postoperative use of analgesics in dogs and cats by Canadian veterinarians. *Can Vet J* 1996;37:552-556.
11. Dohoo SE, Dohoo IA. Attitudes and concerns of Canadian animal health technologists toward postoperative pain management in dogs and cats. *Can Vet J* 1998;39:491-496.
12. Phillips DM. JCAHO Pain management standards are unveiled. Joint Commission on Accreditation of Healthcare Organizations. *JAMA* 2000;284:428-429.
13. Ferrell BR, Dean GE, Grant M, et al. An institutional commitment to pain management. *J Clin Oncol* 1995;13:2158-2165.
14. Marks RM, Sachar EJ. Undertreatment of medical inpatients with narcotic analgesics. *Ann Intern Med* 1973;78:173-181.
15. Rollin BE. Pain and ideology in human and veterinary medicine. *Semin Vet Med Surg (Small Anim)* 1997;12:56-60.
16. Rollin BE. Some conceptual and ethical concerns about current views of pain. *Pain Forum* 1999;8:78-92.
17. Hellyer PW. Management of acute and surgical pain. *Semin Vet Med Surg (Small Anim)* 1997;12:106-114.
18. Hellyer PW, Gaynor JS. How I treat: acute postsurgical pain in dogs and cats. *Compend Contin Educ Pract Vet* 1998;20:140-153.
19. McMillan FD. Comfort as the primary goal in veterinary medicine. *J Am Vet Med Assoc* 1998;212:1370-1374.
20. McMillan FD. Emotional pain management. *Vet Med* 2002; in press.