SAYING GOODBYE: NAVIGATING THE LAST APPOINTMENT

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Abstract

Euthanasia can be one of the most challenging things we do in veterinary medicine. It requires both technical skills but also an understanding of the owner's emotions. Wording (verbal priming) and phrasing can make or break this appointment. A two-step process is ideal; sedation or anesthesia followed by euthanasia and at no time should the pet be separated from the owner. The former may be achieved by oral, subcutaneous or intramuscular routes and should be free of unpleasant side effects. Euthanasia is often performed using the intravenous route, but this is not always possible. Alternate routes include intrarenal, intrahepatic, intracardiac and intra-peritoneal.

Keywords: sedation, drugs, verbal priming, alternative routes, comfort, aftercare

Introduction

"A life is a story, and the way a story ends is one of the most important parts" - *Mary Gardner, Co-founder, Lap of Love Veterinary Hospice.*

This discussion focuses on owned cats and dogs when a decision is made to euthanize them. This in no way diminishes the importance of how we deal with euthanasia of pets in shelters, however that is a topic that deserves its own discussion.

Euthanasia is an important part of our duty as veterinarians and there are many reasons for ending an animal's life. When we, or the owner can no longer provide the pet with an acceptable

quality of life, euthanasia should be regarded as a treatment option and not a failure. The "last appointment" a veterinarian has with a pet is often the one to perform euthanasia and this is an emotional time for the owner and the entire health care team. It can also be a "make or break" appointment which dictates whether or not the client will return to the same practice if they acquire a new pet. How should we approach euthanasia in a way that considers the best interests and welfare of all stakeholders (with the dog or cat being central to the discussion) and issues including, but not limited to ethics, finances, religious beliefs and emotional wellbeing? It is likely that every veterinary graduate will perform a euthanasia, yet there is little time devoted to this subject in the veterinary curriculum leaving many new doctors unsure of both the technical components of the procedure (the science of veterinary medicine, or the science of death) and how to deal with their own emotions, those of owners and coworkers, which we can think of as the "art of euthanasia". Providing a "good death" requires that we draw on both the science and art of veterinary medicine. The rest of this discussion focuses on "the how to do it" and do it well.

Mapping the ideal euthanasia experience

There are multiple steps involved in the euthanasia process and each one must be well coordinated; communication within the team and between the team and owner is essential. If we look at how people evaluate an experience, there are two main times to consider; while they are "in it" and afterwards, and the view or recollection of each period may be very different. The so called "Peak-End" rule suggests that the worst moment and the one at the very end are what stick in people's minds. In his book, Being Mortal, Atul Gawande discusses how people rate a painful or unpleasant procedure as being "not so bad" if the very end is comfortable or less painful than the worst part they endured. Although our aim is for every step to be as good as it can be under

the circumstances, that last moments spent with their beloved pet is very important to owners. It can be helpful to use a map and create specific "standard operating procedures" to help you navigate from the beginning to the end, which includes after the euthanasia has been performed. Working with your team to make each step the best it can be and for the flow from one to the next be seamless is time well spent.

Some practices offer in-home appointments for euthanasia and there are a growing number of in-home euthanasia services throughout the country. Many times, the procedure is performed in the clinic or hospital that the owner has used for all their medical care. Sometimes it happens during a crisis in an emergency room and each party is a stranger to each other. Within a clinic there may be enough space for a comfort room that is used for breaking bad news and performing euthanasia. When space is limited, an examination room is used. With some planning, an examination room can quickly be transformed into a softer less clinical environment. When owners are asked about euthanasia experiences the "cold metal table" is very frequently mentioned as something negative which sticks in their mind. Another commonly brought up memory is of "when they took my cat/dog to the back". This is something to avoid, as discussed later, intravenous catheters are not required for euthanasia and separating the pet from the owner at such an emotional time can be devastating for them (see "things on the never do list" below).

Creating the right environment

Placing a plant in the corner of the room and putting some cushions and fleece blankets on, or over tables and chairs is simple to do. Ideally there should be a dimmer switch so that you can create soft lighting, or alternatively switch off harsh overhead lighting and use a lamp. A sound machine (waterfall or waves) can be soothing. A small basket with supplies for the owner should be in the room; thoughtful supplies include tissues, wet wipes, a small mirror (mascara runs

when you cry), and a bottle of water. After sedation, offer owners some time alone with their pet. Discuss that this should be no more than 5-10 minutes and supply them with a wireless doorbell to press when they are ready (choose a place elsewhere in the clinic to put the receiver to summon you). Notices or flags (coded for euthanasia) can be placed outside the room so everyone in the veterinary team know that a euthanasia is in progress so they can keep quiet and avoid accidentally entering the room. Items such as an electric candle and sign can be placed in the reception area to alert other clients that a euthanasia is in progress.

It is essential to make a note in the owner's file denoting which room their pet was euthanized in – this room should be off limits for that client with other pets, or a new pet. If it is the only room you have, be aware it may bring up difficult memories for the client.

Some things on the "never do" list:

- Never get the sex or name of the pet wrong
- At no time during the appointment should the pet be separated from the owner
- Do not outline every possible thing that could go wrong
- If it is taking longer than expected for the patient to become sedated or the heart to stop, never say "he/she is fighting it"

Performing the procedure

You must be current with, and follow all Drug Enforcement Administration, Federal, State and State Board rules and regulations for the ordering, use, transport and disposal of controlled drugs.

Sedation protocols

Why sedate prior to euthanasia? This allows for minimal restraint during euthanasia and also allows the owners time with their cat or dog when it is in a relaxed, peaceful, sleeping state – this

can be a great comfort to many owners when their pet has been struggling prior to this appointment. Sedation also allows the owner, if they wish, to have time alone with their cat or dog and to have their pet on their lap or next to them for the final phase of the procedure.

The goals of pre-euthanasia sedation are to use a protocol that is consistent (always works), has a predictable time to onset, a consistent duration, can be given intramuscularly (IM) or subcutaneously (SC) and causes minimal reaction by the patient when it is injected, and few, if any unwanted side effects. Because there are numerous published protocols this suggests that the "perfect" one does not exist for every cat and dog. I would advise trying several protocols, until you find the one you like best; you will soon know what works for the very ill, geriatric frail animal versus a still feisty dog or cat. **Tables 1 and 2** show several recommended protocols for dogs and cats. Reducing the reaction by the patient can be achieved by using size 25-27g needles and injecting slowly. Adding a small (~ 0.1 mls) amount of Vitamin B12 (pH 7.8) solution to the syringe seems to reduce the sting of administration. If the first injection is not sufficient, and you have allowed enough time to pass (~10 minutes), stay calm, make sure you have back up supplies and repeat the sedation. If the euthanasia is planned in advance, it may be possible to use oral medication before arrival at the appointment. Gabapentin and trazodone are good choices for cats and dogs respectively.

If you know injecting a dog is going to be very difficult, or an owner asks you for an alternative to an injectable sedation, oral detomidine gel (Dormosedan®, Zoetis) can be used transmucosally.[1] In cats, tiletamine/zolazepam is a good choice for buccal administration.[2]

Euthanasia techniques - drugs

Examples of euthanasia solutions: DEA Schedule CII (pentobarbital alone) – Fatal Plus®

DEA Schedule CIII (phenytoin or lidocaine added) – Somnasol®, Euthasol®, Beuthanasia-D®.

Routes of administration

Intravenous injection is ideal, and the medial saphenous vein is a good choice in cats so that the owners can remain stroking their cat's head and speaking to it. In the dog, the lateral saphenous is ideal for the same reason. Placing a soft fleece blanket over the cat or dog and turning slightly towards the rear end of the patient, can often prevent the owners from seeing what you are doing. If you let the bottom hind leg drop downwards, the vein will often fill on its own negating the need for a tourniquet. If a tourniquet is used, invest in one that is easy to release with one hand. Instead of alcohol which looks and smells clinical, wet down the fur with a wet swab or spray (use a small "spritz" bottle) of water; adding a few drops of lavender oil is a good idea. If you do shave over the vein use small, cordless and quiet clippers which are well maintained. Avoid IV catheters and use a small gauge butterfly needle instead; this is easier to place and can be very quickly removed at the end of the procedure. In some cases, the IV route will be challenging or you first (or second) attempt fails. Other routes of administration are acceptable if the animal is unconscious or unresponsive; if a cat or dog does not respond to a noxious stimulus (e.g. a toe pinch), I feel confident using a non-IV route – this is another reason to always use a 2-step process; sedation followed by euthanasia. These other techniques are explained in detail in the AVMA 2013 Euthanasia Guidelines, in Dr Coony's book and Dr Mary Gardner's article (see suggested reading). They include intra-renal (my first choice for cats), intrahepatic, intracardiac and intraperitoneal. Please refer to these resources for descriptions of how to perform these techniques and dose adjustments for euthanasia solutions.

Things that make a difference – verbal priming

Replace "you" with "we" whenever possible, for example, instead of "you will know when it's time" say "we will work together to know when it's the best time". Instead of saying "there's

nothing more you can do" say "you have done an amazing job". If an owner says, "this must be the worst part of your job", reply with "this is an honor".

Memorials

Many things can be done to honor the pet, including fur clippings, paw prints (clay or ink), memorial cards, photographs, and on-line (social media) posts.

Aftercare and removing the pet

Using nice baskets and blankets to "tuck" a cat in (do not cover the head) can be very powerful as described by this owner: "the surprising part to me was how the little things that you did made such a difference. I had imagined that you would bring in a cardboard box to put her in, but no, you brought in a pretty basket with a brightly colored pillow to put her on. The image of her lying there was my last memory of her, and it was beautiful". For small dogs baskets can be used and for larger dogs, a blanket over a stretcher works well but again never cover the head while the owner is present. When the owner is ready to leave, have someone on your staff come in to be with the pet, so they don't feel it is alone. Aftercare may be burial, private or communal cremation. This is usually discussed before the procedure, but be prepared for owners to change their choice, so remain flexible.

Follow-up

Follow-ups with the clients will vary – if it is a long-term client you likely know what would work for them. However, a phone call is always good, even if you end up leaving a message, and e-mail is also appropriate in most cases. Leaflets about grieving, how other pets and children in the household may react are available and should be provided; these allow the client to read them in their own time because of their emotions during the appointment they are unlikely to remember much of what you said.

As veterinarians, we have the honor of being allowed to perform euthanasia; with thought and preparation this "last appointment" can bring closure to a family and leave them with good memories of their precious 4-legged family member.

Table 1. Suggested pre-euthanasia sedation protocols for cats; these protocols should result in a deeply sedated or anesthetized cat within 3 to 6 minutes. Route of administration: IM or SC.

Drug concentrations:

Tiletamine/zolazepam = 100 mg/ml (50 mg/ml tiletamine + 50 mg/ml zolazepam);

Ketamine = 100 mg/ml; Acepromazine = 10 mg/ml; Midazolam = 5 mg/ml;

Butorphanol 10 mg/ml. NOTE: nalbuphine (not a controlled substance) can be substituted for butorphanol. **Doses given in milliliters; all drugs combined in a single syringe.**

1. "KAT"

Weight lbs.	Weight kg	Ketamine	Acepromazine	Tiletamine/zolazepam
≤ 10	≤ 4.5	0.1	0.1	0.2
10-20	4.5 – 9.0	0.15	0.15	0.3

2. "KBAM"

Weight lbs.	Weight kg	Ketamine	Butorphanol	Acepromazine	Midazolam
≤ 10	≤ 4.5	0.3	0.3	0.1	0.3
10-20	4.5 – 9.0	0.4	0.4	0.1	0.4

3. Using Tiletamine/zolazepam reconstituted with acepromazine and ketamine (reduces total volume of injection)

Reconstitute Telazol powered with 2.5 mls of acepromazine and 2.5 mls of ketamine

Weight in lbs.	Weight in kg	Dose (mls)
≤ 10	≤ 4.5	0.2
10-20	4.5 – 9.0	0.3

Table 2. Suggested pre-euthanasia sedation protocol for dogs; these protocols should result in a deeply sedated or anesthetized dog within 3 to 6 minutes. Route of administration: IM or SC.

Drug concentrations: Ketamine = 100 mg/ml; Acepromazine = 10 mg/ml; Xylazine 100 mg/ml; Butorphanol 10 mg/ml. NOTE: nalbuphine (not a controlled substance) can be substituted for butorphanol. **Doses given in milliliters; all drugs combined in a single syringe.**

1. Ketamine @ 1.5 mg/lb., 3.3 mg/kg; Xylazine @ 0.5 mg/lb., 1.1 mg/kg; Butorphanol @ 0.1 mg/lb., 0.22 mg/kg; Acepromazine @ 0.05 mg/lb., 0.11 mg/kg.

"Cheat sheet"

Weight in lbs.	Weight in kgs	Ketamine	Xylazine	Butorphanol	Acepromazine
0-20	0-9	0.3	0.1	0.2	0.1
21-40	9.5-18	0.6	0.2	0.4	0.2
41-60	19-27	0.9	0.3	.06	0.3
61-80	28-36	1.2	0.4	0.8	0.4
81-100	37-45	1.5	0.5	1.0	0.5
101-120	46-55	1.8	0.6	1.2	0.6

2. All the following are milliliters *per 10 lbs. or per 4.5 kg*: Ketamine 0.1, Xylazine 0.05, Butorphanol 0.05, Acepromazine 0.1.

Suggested reading

- Cooney KA, Chappell JR, Callan RJ and Connally BA. *Veterinary Euthanasia Techniques.* Ames: Wiley-Blackwell, 2012.
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- Gawande A. Being Mortal, Medicine and What Matters in the End. New York: Metropolitan Books, 2014.
- AVMA Guidelines for the Euthanasia of Animals: 2013 Edition (soon to be updated) www.avma.org/KB/Policies/Documents/euthanasia.pdf

Resources: Register at www.lapoflove.com/resources for access to Lap of Love resources; use password DVMSUPPORT

References

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2. Nejamkin P, Cavilla V, Clausse M, et al. Sedative and physiologic effects of tiletamine-zolazepam following buccal administration in cats. J Feline Med Surg. 2019:1098612X19827116. [Epub ahead of print]