Anesthesia for your pet, is it safe?

Anesthesia: the lack or loss of sensation. According to the American Heritage Dictionary, this word may have been a part of the English lexicon for centuries, but it wasn't until Oliver Wendell Holmes, a physician, poet, and father of the Supreme Court justice of the same name, coined the term when writing to William Thomas Green Morton in 1846. It turns out that earlier that year Mr. Morton had successfully demonstrated the use of ether at Massachusetts General Hospital in Boston, and Mr. Holmes was giving his suggestion for what to call the new medical technology.

The medical field (both human and animal) has seen tremendous advances in anesthesia since those first experiments with ether 150 years ago. New drugs, improved patient monitoring, and a better understanding of the effects anesthesia has on the body have resulted in remarkable levels of safety. But despite these advancements, anesthesia is not, and never will be, a "risk free" procedure. Because of this, many are understandably hesitant to subject their family members (animal or human) to any procedure involving anesthesia.

Anesthesia has many forms. One type that carries little risk is local anesthesia. Novocain and other local anesthetic drugs can render a spot or region numb to painful stimuli so minor procedures, a biopsy for example, can be performed. This technique is used occasionally in animals, but there are times when it is not practical. Why, you ask? Think of dental work. In humans local anesthesia is frequently used to address dental problems. Conversely, in dogs and cats, it's not too likely we're going to get a lot of cooperation in the "dental chair". In addition, local anesthesia can sting a bit when it is injected. Some animals tolerate this, others don't. And if they don't, there's not much chance of talking them into it.

General anesthesia refers to rendering a patient unconscious so procedures can be done safely and accurately. Obviously major surgery requires general anesthesia, but other seemingly less serious or invasive procedures require the patient to be unconscious as well. Procedures like medical imaging, where patients have to remain motionless (CT and MRI), can be done in people while they are conscious, but pets need to be anesthetized. Sometimes very simple procedures, such as cleaning a pet's ear, suturing a wound, or removing a foxtail, need general anesthesia. The bottom line is that general anesthesia is an indispensable and vital tool in veterinary medical practice today.

With veterinarians needing to use anesthesia so much, the last two decades have seen major efforts to improve its safety. Again, while it will never be risk free, many new developments have made anesthesia much less of a medical hurdle it once was.

Ongoing research and development have resulted in many new anesthetic pharmaceutical agents. These new drugs that have surfaced in veterinary anesthesia, usually barrowed from human medicine, enable veterinarians to anesthetize animals that previously were considered too sick or unstable for anesthesia.

Regardless of which drug we use, they all can have some negative effects on the patient. For this reason pre-anesthesia evaluation and anesthetic monitoring of the patient have probably seen the biggest advances in recent years.

A patient being considered for anesthesia, regardless of age or know health status should be carefully evaluated with a complete physical exam and blood tests. To some this might sound like too much for that healthy young pet, but as any veterinarian will tell

you, it's always better to learn about a hidden problem before the animal is under anesthesia rather than being surprised to find something when the patient is undergoing the procedure. Additionally, a careful pre-anesthetic assessment gives the doctor a "baseline" to compare to in the event there are unexpected developments during or after the procedure.

Once the animal is under anesthesia, many things can be done to improve the safety of the procedure. Intravenous fluids are very helpful in maintaining adequate blood pressure. This is important because most anesthetic drugs cause blood pressure to drop, and if this low blood pressure is severe and prolonged it can have deleterious effects on various organ systems. The I.V. catheter that the fluids are administered through also serves as a vital I.V. port where drugs can be quickly administered to stabilize the patient if a problem arises.

Various technologies are now available to evaluate patient vital signs while they are anesthetized. As already mentioned, blood pressure should be monitored and adjustments made in the fluids to maintain it at acceptable levels. An instrument called a pulse oximeter allows heart rate and blood oxygen levels to be constantly measured to help assure the patient is stable and safe. Efforts should be made to keep patients warm as anesthesia will inevitable cause a drop in body temperature. Finally, and most importantly, trained personnel need to be constantly monitoring the patient for depth of anesthesia and signs of problems and, under the guidance of the doctor, make any necessary adjustments. There is no question that patient monitoring is the most important and labor intensive part of the anesthetic protocol.

Once the procedure is complete, the patient's anesthesia recovery begins. How fast a patient recovers depends on the types of drugs used, the length of the anesthesia, and the underlying health of the patient. Anesthetic problems can still occur at this time, so the patient needs continued close monitoring.

Whether or not to anesthetize a patient is a decision veterinarians face every day. It's not taken lightly. While the pet owner and I may understand that a pet needs a procedure to improve their health or comfort, I am constantly aware that in my effort to help that patient, I need to subject it to a small risk. With the increased focus on anesthetic safety in recent years, I feel confident that the anesthetic risks my patient faces are extremely low. Nonetheless, we should always maintain a healthy respect for the anesthetic process, and use it only when the benefits of the planned procedure outweigh those risks.

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