Low-Stress Medication Techniques in Birds and Small Mammals

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KEYWORDS

• Low stress • Treatment • Medication • Training • Learning • Welfare

KEY POINTS

- Forceful, coercive, and fear-evoking treatment methods can be behavioral harmful to the patient as well as result in lower prognosis and impaired clinical outcome.
- Many medical behaviors can be trained using science-based methods, often quickly and effectively, in a veterinary practice setting.
- Keys to implementation of low-stress medication techniques in practice require the ability to recognize fear and to use desensitization and counterconditioning and the use of versatility, adjusting methods to best fit the behavioral and medical needs of the patient at hand.
- Medication can be optimally delivered through the use of food vehicles and via operantly trained medication/treatment behaviors.
- Selective and appropriate use of conscious sedation and even general anesthesia may be appropriate in select cases at key times, but these pharmacologic interventions rarely should become the sole methods for maintaining long-term treatment or execution of medical procedures.

Video content accompanies this article at http://www.vetexotic.theclinics.com/.

INTRODUCTION

Low-stress medication techniques are an important component of ethical and effective treatment. Paired with the medical details of patient management, by balancing medication techniques, success can be greatly enhanced. Low-stress medication

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techniques require careful assessment of body language, at times may use strategic and appropriate use of anxiolytics to facilitate some medical procedures, and often use the regular implementation of target training as a gateway to other trained medical behaviors as well as enrichment. The neurobiological aspects of the stages of memory formation, and how these stages may be influenced by stress and some therapeutics, are explored.

CAPTURE AND RESTRAINT

Many case reports, veterinary textbook references, conference proceedings, and discussions describe techniques and treatments used to provide medical care for birds using the term "capture and restraint," or fail to describe the methods used and assess their behavioral outcome on the patient. Loosely, "capture and restraint" often includes combinations of techniques that include physically overpowering the bird, sneaking up on or surprising the bird, or other means to quickly get the bird restrained and get the task at hand done. In addition, videos of these methods and techniques, good and bad, live in perpetuity on YouTube and other sources, are repeated, and are even referenced in current presentations. Conversely, medication techniques may also not even be described at all in scientific studies, case reports, or other descriptions of procedures requiring therapeutic administrations. These realities, in turn, can result in further confusion and misunderstanding about the "controversial" views on the topic.

Similar issues are encountered in small mammals because veterinarians are often trained to handle and restrain these animals using "traditional methods," such as applied in laboratory animals. Moreover, animals are often chased in their cage before being grabbed quickly and forcefully and held in the air with their feet off the ground. This activity in itself is likely innately aversive to the animal because it mimics the chase-and-capture action of a predator. However, additional stress and anxiety may result because of the aversive nature of the treatment that is being administered, especially if the procedure is recurring on a daily or twice-daily basis. As a result, it is not surprising that a large number of animals will show fear behaviors or resistance when being handled. For example, surveys among rabbit owners have shown that around 60% of rabbits will struggle if lifted or demonstrate fear-related aggression upon being approached.[1–4]

> *By restraining pets in a forceful, crude or unskilled manner, you could be breaking your promise to do no harm. Such handling can make pets behaviorally worse and even lead to aggression and, ultimately, euthanasia.*
>
> *—Dr Sophia Yin*

This quote really applies to how veterinary professionals interact with pets in all aspects of veterinary medicine, not only restraint.

Outdated methods or techniques that are not evaluated for effectiveness on all aspects, above and beyond outcome alone, typically overlook some of the more important ethical considerations and best practices for pet birds and small mammals. When veterinarians and health care personnel did not look back and critically evaluate the outcomes of restraint and medication methods, most people were quick but incorrect to pronounce those methods effective. This is especially true in parrots as an example, as their intelligence and learning capacity was often discounted. In reality, these "successes" were in fact often quite far from their ideal or intended mark. The adverse effects of our own failure to appreciate learned fear in the development of and shaping of behaviors during in-patient treatment and clinical procedures are immense. Inadvertent, unrecognized, or unaltered use of stressful or fear-