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DISCUSSION

Discussion Round Table: Terminology Think Tank

Karen L. Overall, MA, VMD, PhD, Dipl. ACVB,[a] Walter F. Burghardt, DVM, PhD, Dipl. ACVB[b]

[a]*From the Center for Neurobiology and Behavior, Psychiatry Department Translational Research Laboratory, School of Medicine, University of Pennsylvania, Philadelphia, PA and the*
[b]*Military DoD Working Dog Veterinary Service, Lackland AFB, TX.*

The discussion Round Table format

Each issue of JVB-CAR will contain in-print discussions of timely or controversial topics, as chosen by the editor, the editorial review board, contributors, or as suggested by organizers of meetings, working groups, or think tanks. The intent is to provide a more academic and rigorous outlet than is currently available for topics for which data may be lacking, but debate is not. The first of these Round Tables focuses on terminology.

Introduction

In July 2005, at the 5th International Veterinary Behavior Meeting (IVBM) in Minneapolis, MN, a "Terminology Think Tank" was convened. The impetus for the Think Tank came from a research meeting organized by Dogs Trust in the UK in November 2004, funded by Dogs Trust and Eli Lilly (Overall, 2005; see abstracts from all participants in same volume).

The goal of the IVBM Think Tank was to begin to codify terminology used in description and diagnosis for veterinary behavioral medicine. The intent was to confirm areas of overlap between opinions, to enumerate divergences, and to identify data and methods that could be collected and used to achieve consensus on a few topics of interest. Feedback and outcomes were then intended to be used to refine a candidate process for further work, of which these papers are the next step. In short, this Think Tank was treated as a Scientific Working Group.

The Think Tank convened over 2 days and involved 15 invited participants (Claude Beata, France; Walter Burghardt, USA; Rachel Casey, UK; Sharon Crowell-Davis, USA; Joel Dehasse, Belgium; Tiny de Keuster, Belgium; Jaume Fatjo, Spain; Sarah Heath, UK; Kathe Houpt, USA; Andrew Luescher, USA; Daniel Mills, UK; Maria Cristina Osella, Italy; Karen Overall, USA; Patrick Pageat, France; Clara Palestrini, Italy; and Kersti Seksel, Australia). Participants were invited because of their interest in the terminology used in behavioral medicine and their availability at IVBM. An attempt was made to achieve international representation. Each participant was asked to prepare a 5-minute presentation for each day's topics, as follows.

The structure of a diagnosis

On the first day, participants were to address the following issues regarding how diagnoses are made:

1. Present the criteria you use to make a diagnosis. Define what a diagnosis means to you.
2. Elucidate the criteria used to ask if the behaviors you are seeing meet the conditions so that a diagnosis can be made. We are particularly interested in the thought process you use.
3. Is there a difference between a diagnosis and a behavioral description? If yes, give an example of each.
4. Explain how you construct a working diagnosis, and discuss what we need to know to move the issue further (eg, what data are needed, what questions can be asked, and how do we do this?). In other words, what information would help you to improve on either your thought process or your diagnostic ability?

Address reprint requests and correspondence: Karen L. Overall, Center for Neurobiology and Behavior, Psychiatry Dept Translational Research Laboratory School of Medicine, University of Pennsylvania, 125 South 30th Street, Philadelphia, PA 19104

E-mail: overallk@mail.med.upenn.edu

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Application of diagnostic criteria to a model case

On the second day, the participants were asked to comment on the following case history, addressing the specific points noted that follow the case. The group was reminded that the goal was to identify areas of consensus. This process does not mean that disagreements will be eliminated. The intent of the Think Tank was to identify areas of agreement, as well as areas of disagreement that will become subjects for future work.

Model case

"Nelson" is a 2-year-old castrated male golden retriever bred and living in the USA. He has some relatively mild lesions on his carpi about which his veterinarian is confused. There is saliva staining and some mild inflammation with some apparent hair thinning, but there is not full hair loss, nor are there excoriations. The clients have never seen Nelson lick or chew his feet, but they have noticed a color change. Also, they were told that Nelson's father had "lick granulomas," and they know one of his brothers sucks on his fleece toys and will do this all day until the toy is taken away. Many members of Nelson's family also have atopy.

The veterinarian has recommended that the client videotape the dog when they are at home, and when they are away from home. Her assessment is that he is pretty normal when at home with his people and the other dog (a 4-year-old spayed female mixed-breed), but that he is different when the people leave. When he is alone, he gets a sock out of the laundry and sucks on it. Once it is wet he begins to suck on first one carpus and then the other where he has held the sock. When the veterinarian questions the clients about Nelson's attention to socks, they tell her that he used to take socks before they left the house, as everyone was getting dressed. The parents finally insisted that the kids put clean socks in drawers and close them, and place dirty socks in the hamper. Since they implemented this rule, the family finds fewer socks strewn around the house when they get home, but Nelson always manages to get one or two from the hamper.

Nelson lives with 2 adults who work outside of the home; their 2 children, both boys, ages 8 and 10 years; and another dog who was only seen in passing on the video when the clients were gone, but who seems to play normally with Nelson on the video taken when everyone was home. These clients have had dogs all their lives, take the dogs for leash walks 3-4 times per day, and run the dogs in a park for at least 15 minutes every evening. The dogs are never crated, have never had any serious illnesses, and were both neutered at 6 months of age to prevent reproduction.

Model case assignments:

1. List the diagnoses that this case makes you consider.
2. Summarize the reasons for considering these diagnoses. We are interested in the thought process that leads to diagnosis. What criteria are you using to make this diagnosis?
3. If some of your criteria are not met by the information in this history, what additional information would you seek, and why?
4. Do you use or avoid any specific terminology regarding the behavior described in the case study or in any of the diagnoses you considered? If you insist that for certain terms to be used specific behaviors must be present, what are the terms? If there are terms you don't use, why?
5. Finally, please explain how you would include or exclude a diagnosis. What terms and/or behaviors would you use to include or exclude the diagnosis? You can use one of your diagnoses as an example, if you would find that helpful.

Consensus and divergence

At the end of each day, summary slides presenting areas of agreement and disagreement were discussed to ensure the group's concurrence that they adequately represented the discussion. The points made in these summaries then served as the basis for a broader group discussion of meeting participants, some of which occurred in writing. These summary statements are outlined below.

The consensus on diagnosis from the presentations and discussion

The consensus for issues pertaining to diagnosis included the following important points:

1. A diagnosis identifies associations between behaviors and causes. A diagnosis unites language and probabilistic associations between behaviors, pathology, environment, et cetera (eg, "cause"), that can be represented using some kind of "decision tree" reflecting these patterns, intervention, and possible outcomes (eg, a "rule").
2. Some objective representation is needed in this field; the behaviors are the data. Because the signaling associated with the behavior is so important and because the behavior may vary over different contexts, real-time, full evaluations are difficult, if not impossible, without videotape.
3. Behaviors must be interpreted within a context that is provided by a good history. This statement is especially true when one questions whether behaviors are problematic and abnormal. That context involves the general pattern of the animal's behavior, the attendant physiology involved, the concomitant physical and social environments, and spe-

cies-, breed-, and ontogeny-typical behaviors. The latter are often unknown or poorly understood.
4. Clients, themselves, use behavioral changes to identify ill animals. Accordingly, we need to incorporate behavioral assays—not just behavioral diagnoses—into all aspects of veterinary medicine.

The consensus for facets pertaining to the model case

The consensus for the short case discussion of Nelson provides a guide for how to pursue understanding behaviors.

1. There was no disagreement that a more complete history was needed, and that this must include an excellent medical history. The behaviors cited (deliberately chosen to be vague but provocative) could be associated with a primary behavioral complaint, a secondary behavioral complaint, or as a complicating factor to a condition that does not have its roots in behavior.
2. Some elucidation may be provided by examining the actual patterns of behavior, especially since the referring veterinarian's interpretation may not be wholly correct.
   a. The sentinel point is that the behavior occurs only in the absence of the clients.
   b. The specific behaviors exhibited must be discussed. A few people commented on the connection of the pattern described with distress.
   c. The "sock routine" is a patterned behavior. There is a set of rules for licking and the involvement of the sock that need to be understood. These rules need to be observed and characterized, and measured and assessed.
3. Although treatment virtually never maps singularly to a diagnosis and so cannot confirm one, use of treatment response as a way of revisiting and revising the diagnosis can be helpful in cases with incomplete information. In fact, if the response is carefully monitored, it may provide a better context for the presenting signs.

Divergent aspects from the presentations and discussion

The divergent or variable findings were far more variable than were the consensus findings when only an approach to a diagnosis was considered.

1. There is clear disagreement about roles for "motivation," "frustration," et cetera. Some participants rely on such assessments, but others avoid them completely because they cannot measure or define them. Yet there was agreement on the potential value in any measurement of these.
2. The role for early developmental experience (eg, "attachment") and long-term, complex effects of this experience when interfered with are unknown. Could they hold the key for some of our understanding?
3. Evaluation of the "emotional state" of an animal is favored by some, and wholly avoided by others. Again, the need for definitional criteria and measurement tools was emphasized.
4. The role for behavioral processes that are adaptive—even in potentially damaging circumstances—has not been studied, but it may help explain some sets of behaviors. Accompanying this concern is the role for physiological state, and the extent to which past experiences could entrain present behaviors.
5. There is disagreement over the general approach to collections of behavioral complaints from clients and the behaviors involved in them. Where is the line to be drawn between syndromal approaches and comorbid ones? Does the value of either of these approaches depend on the rules used for determining diagnoses?

Divergent aspects pertaining to the model case

Further insight into the divergent approaches can be gained from the summary of differences of opinion regarding the ascertainments requested about Nelson's case.

1. Many of the points raised about the information needed for a diagnosis actually have to do with management, treatment, and prevention. This point suggests that, in part, the focus on thinking about how you would treat something affects diagnosis, whether in broad categorization (see Houpt, this discussion; McHugh, 2005), or in ones more narrowly focused (Overall, 2005).
2. We discuss behaviors that may not be normal, but the baselines for normal behavior have still not been established for most species. In the most comprehensive study of early development done to date, Scott and Fuller (1965) noted that intralitter variation swamped interbreed variation for many early behaviors. How much do we need to understand such variation to improve our diagnostic and treatment capabilities?
3. The history suggested a familial pattern of generally odd behaviors, including some potential sensory factors, yet these aspects were discussed by only a few participants. An examination of this pattern may be important from the mechanistic standpoint: there are sensory aspects to the stereotypic behaviors, the neuroepithelium gives rise to the nervous system and skin, and both mouse and human studies suggest that sensory sensitivities and responses may be more complex than originally thought. The familial association, if real, could suggest a role for regulatory genetics.

Summary

Although these more divergent views show how different theoretical foci shape the approach and point of departure

for discussion and diagnosis, what is clear from the above is the agreement on the need to vigorously pursue areas of behavior often considered only tangential to the actual daily practice of veterinary behavioral medicine (eg, ethograms, normal behavior and effects of ontogeny, behavioral neurogenetics, sensory assessments, etc.).

As part of this discussion section, participants were asked to further discuss the issues they felt were important. The contributions of Sharon Crowell-Davis, Joel Dehasse, Jaume Fatjo, Kathe Houpt, Daniel Mills, and Clara Palestrini follow in this volume.

The future

Future issues of JVB-CAR will contain submitted commentary from other participants, and any follow-up discussion, both from those who participated in the Think Tank and those in the readership community. *Readers are asked to join in the discussion.* The only requirements for submission to this journal forum are that articles must be written in the scientific style; references and citations must be provided, the discussion must be professional, and the discussion must use structure and topics listed previously and in the following individual commentaries. Submissions for this Discussion Round Table should follow the process for routine manuscript submission.

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