

Editor's note: We all have something we do especially well, or a case we are especially proud of. Most items in a publishable case report can be extracted from your patient records. Case study reports can benefit us all by sharing CAVM methods with each other, as well as increasing the mass of evidence for its success.

Improving Evidence: A Brief Review of the Use of Clinical Case Reports in Complementary and Alternative Veterinary Medicine

Richard Palmquist, DVM. Centinela Animal Hospital, 721 Centinela Avenue, Inglewood, CA 90302. 310-673-1910.

"...case reports are an important area of scientific enquiry and one that is entirely appropriate for the CAVM community. Robert Fletcher of Harvard Medical School states that "case reports are not on the fringe of science and clinical practice, as they are sometimes believed to be. They deserve serious, scholarly consideration." (Jenicek 2001)

Abstract

Evidence-based veterinary medicine (case studies) is being increasingly used to evaluate therapies. The Research committee of the AHVMA has established the goal of increasing published case studies in CAVM. This will help practitioners of CAVM as well as be a guide to legislative bodies.

A publishable case report contains:

A brief **abstract** summarizing the case

A **title** that clearly describes the case, which is easily searchable by a database

Authors, with their contact information, in alphabetical order of their last names, except that a senior author may be listed first

An **introduction**, with references, summarizing present knowledge and treatment of the condition, with expected results.

The **case report**, containing:

- Patient description
- Chief complaint
- Patient history, including environment and diet
- Client views and goals
- Results of diagnostic procedures
- Differential diagnosis, prognosis, and treatment plan
- Followup exams and progress
- Final outcome

Discussion including opinion and assessments of the treatment

References, in the form required by the journal

Introduction:

Veterinary medicine is moving rapidly towards an Evidence-Based medicine system for use in evaluating the appropriateness and usefulness of therapies available to practitioners and researchers. Increasing discussions of Evidence-Based Veterinary Medicine (EBVM) appear regularly in professional medical and legal journals. (Hardin, Robertson 2006; Kochevar, Fajt 2006; Working Party of the Royal College of Physicians 2005) As the veterinary research literature expands, EBVM will play a significant role in assisting veterinarians in evaluating data presented as useful in the treatment of animals. The purpose of this article is to introduce basic information about EBVM and use of case reporting to the complementary and alternative veterinary medicine (CAVM) community, and to encourage increased use of this material in publication and lectures created by our membership.

The Research committee of the AHVMA has recently been reactivated with the purpose of increasing the amount of published material, which can be used by veterinarians and other

interested parties to demonstrate effective clinical uses of CAVM, as well as, to assist legislative and regulatory bodies such as state boards in properly evaluating consumer complaints and legislative requirements regarding CAVM practitioners and practices. (AHVMA 2006a) This committee is working to increase the number of high-quality, useful pieces of literature, which can be used to establish the validity and applicability of CAVM, and sees this as an important action at this time. It is hoped that competent CAVM clinicians and researchers will use EBVM to document their successes. Establishing proper scientific literature and making it more readily available allows for more interested parties to learn about many of the miraculous results seen in CAVM practice. (AHVMA 2006b) Doing such actions allows for the expansion of knowledge, the expansion of CAVM acceptability and for the improvement of our profession; and EBVM depends utterly upon having access to correct, current and complete information for its best functioning.

CAVM is by definition, "a heterogeneous group of preventive, diagnostic, and therapeutic philosophies and practices. The theoretical bases and techniques of CAVM may diverge from veterinary medicine routinely taught in North American veterinary medical schools or may differ from current scientific knowledge, or both." (AVMA 2006) An excellent review of the history of CAVM and EBVM is contained Allen Schoen and Susan Wynn's textbook on CAVM, which is the foundational text introducing CAVM to broader publics. (Schoen, Wynn 1998). The CAVM community often consists of professionals who continue to seek out additional methods of assisting patients. Conventional veterinary medicine does not have answers to all cases that are presented for assistance. Professionals and consumers of CAVM are often dissatisfied with certain aspects of conventional medicine. Such dissatisfaction can arise from many sources including:

- (1) poor or no results in a particular area or case
- (2) failure of conventional methods to address the cause of a condition, thus concentrating on merely suppressing symptoms without more permanent relief of disease condition
- (3) reliance on medications or surgeries that may have toxic, damaging, or unpleasant side effects
- (4) paradigmatic conflicts between conventional medicine and psychological or spiritual views of the patient or consumer
- (5) positive experience by consumers with CAVM
- (6) disagreements with a conventional practitioner.

Studies of human medicine have shown that Complementary and Alternative Medicine users have higher personal income, higher levels of education and desire more personal approaches to their health care needs. (Grey, et al 2002; Tindle, et al 2005) Few such studies exist in the veterinary profession but clinical experience suggests similar reasons exist in our profession.

Case reports consist of simply presenting data from the clinic. They can be used for many reasons:

- (1) presenting a new disease
- (2) presenting new treatment options
- (3) summarizing case responses for clinic medical rounds
- (4) summarizing case results and treatments for legal reasons such as in law suits or in reviewing and planning legislative or regulatory actions.

Each form of case report contains slightly differing material and a good summary of these is contained in Jenicek's text, which forms the foundations of this article. (Jenicek 2001)

Clinical case reports have been incorrectly perceived to be less important, or even not important, in the present environment of scientific literature, as they form a lower level of scientific evidence. However, case reports are an important area of scientific enquiry and one that is entirely appropriate for the CAVM community. Robert Fletcher of Harvard Medical School states that "case reports are not on the fringe of science and clinical practice, as they are sometimes believed to be. They deserve serious, scholarly consideration." (Jenicek 2001)

Case reports are especially appropriate in CAVM as they serve importance in reporting first occurrences of particular diseases or therapeutic responses to novel therapies, as well as, in reviewing application of various modalities in integrative practice. Well-done case reports are highly desired by epidemiologists and researchers in identifying areas for further research. Once a case report appears, researchers can examine case series studies, and then design appropriate procedures for better testing materials useful in diagnosis and treatment. This is a totally appropriate course of evaluation by scientific methods, and leads to strong evidence and eventual support of such procedures. Such steps were seen in the recent recommendation by boarded internists regarding the use of the milk thistle extract (silymarin) and SAMe by conventional medicine in treatment of hepatitis patients, a practice used by CAVM doctors for quite some time.

Jenicek defines evidence as "any data or information, whether solid or weak, obtained through experience, observational research or experimental work (trials). This data or information must be relevant either to the understanding of the problem (case) or to the clinical decisions (diagnostic, therapeutic or care-oriented) made about the case." (Jenicek 2001) EBVM is heavily interested in well done case reports that provide evidence as defined above, and case reports of incredibly important in the advance of CAVM. Competent, bright clinicians are perfect sources of such information. With the advent of clinical professorships in integrative veterinary medicine, such as Narda Robinson at Colorado State University, it is hoped that greater cooperation may be achieved in the future as clinicians provide areas for more productive research by academic medicine. Interest in such material is at an all time high.

A good clinical case report will contain the following information:

1. A **title** that clearly describes the case and modality used. An author wants his or her materials to be readily accessible to those interested. This is important to those accessing databases and doing literature searches. (Cockcroft and Holmes 2003) Descriptive titles read as a sentence (e.g., *The use of photo-acupuncture in treatment of feline nasal squamous cell carcinoma: a case report*). A person interested in finding references about photo-acupuncture could readily search under "photo-acupuncture" and return useful references. Another person interested in finding treatment options for squamous cell carcinoma could also find references, although the results of such a broad search would likely be massive (Pubmed yields a daunting 81,104 references). Narrowing the search by including species in the title reduces the number of references to 196, which would be more helpful to a busy clinician interested in treatment options for a client's cat. Addition of photo-acupuncture yields only seven articles and none have to do with squamous cell carcinoma in cats. Spelling is a critical issue as searching under "photoacupuncture" results in no articles, while searching "photo acupuncture" provides 1400 articles for examination. Treatments should be named generically, not as a brand name. This enables a search for all instances of that treatment. In addition, those who are not familiar with a brand name will not inadvertently omit a specific product in their search.

2. An **introduction** that summarizes quickly the present knowledge about the medical condition described and its conventional therapy, as well as expected results of that treatment. Statements of fact which are not obvious must be referenced. This section establishes why the information might be useful to veterinary medicine. There is an obvious need for reports about improved conditions in cases where conventional therapy and diagnosis fail to completely, safely resolve a medical condition, and where CAVM procedures have succeeded. While such cases cannot establish the effectiveness of the modality used, they provide primary evidence suggesting a need for further research. They also give other clinicians secondary options to choose in cases where established therapy is undesirable, has failed or has been declined by the animal's steward. In the case of herbs, nutraceuticals, homeopathy, homotoxicology, etc., descriptions of a product should include ingredients and their form (powder, tincture, etc.), with a footnote for the brand name and manufacturer. Some journals request a summary or abstract that encapsulates the entire paper in a few paragraphs. This allows readers to quickly preview the article to see if it meets their needs before investing larger amounts of time and effort involved in reading the

complete work. Such summaries usually precede the introduction section.

3. **Case report presentation.** This includes the **patient identification and demographic data** (species, breed, age, sex, vaccine status, neutering status, and special uses or environmental issues). **Chief complaint** or reason for the medical presentation. **Patient history** (travel, residence, environment, prior illnesses and treatments). **Client views about the issue**, prior therapy, personal treatment goals, or other personal issues as applicable to the case. Physical examination results. **Paraclinical evaluation** (results of diagnostic procedures such as laboratory, imaging and other objective evaluations). The **clinician's impression** and working or provisional diagnosis. Immediate **treatment plan** and orders with general reasoning behind that course of action, including entire treatment used (e.g., including diet as well as specific modalities). **Differential diagnosis and diagnostic and therapeutic planning.** **Prognosis and priority assessment** of present problems. **Follow-up examinations, tests and progress.** **Final outcome and evidence of the treatment plan's causation** in the final outcome.

4. **Discussion of the case.** This is where the author can review further literature and correlate their opinions and assessments with the case presented. All literature must be referenced and footnoted. Such discussions usually originate new questions for further investigation and evaluate the data presented suggesting possible uses for the data.

5. **References.** References serve several purposes. They provide the reader with useful reading and direct their attention to information that may not be widely known, but important to the subject. They also allow the reader to evaluate the data presented for its usefulness and reliability.

Discussion:

CAVM contains many useful theories, techniques, and treatment options, which CAVM practitioners use daily to assist patients in their search for health and longevity. Critics frequently invalidate CAVM for its lack of scientific literature and for ideas that disagree with mainstream medicine. Dialogue with hardcore skeptics can amount to a waste of time as some of these individuals have no real desire to approach CAVM with an open mind or actual scientific evaluation, but there are valid criticisms of the CAVM community regarding our lack of published and researched materials. These discussions have been well reviewed elsewhere and are not the center of this paper. (Wynn 2006).

Einstein suggested that an investigator need only “read the meter and record the result” in his advice to remove personal bias and opinion from research. Case reporting is one way that CAVM practitioners can record their results publicly so that others can benefit from their labors. We know that investigator bias can affect research results and quantum physics has clearly demonstrated that the observer can affect the results of phenomena in the physical universe. This effect can lead to positive results that are not repeatable by others, as well as negation of procedures due to improper environment. Science consists of an orderly progression and categorization of data about the physical universe. Once material is known and verified it can be organized into useful applications, which are known as technology. All veterinarians, whether CAVM, conventional or integrative practitioners have an interest in seeing proper scientific method applied to our field, but improper science can rapidly lead us to erroneous and even harmful conclusions.

Critics of CAVM are quick to point out the lack of double-blind randomized studies in our field, often without recognizing the situation present in conventional veterinary practice. In many situations, this type of study is not readily applicable to CAVM processes as therapy is individualized to each specific patient's particular situation. As an example, homeopathic cases are not easily studied in this manner, while acupuncture and herbal medicine can be. CAVM literature frequently consists of case reporting and these reports are often correctly criticized as being incomplete or improper for use by EBVM. Since case reports are often disregarded by those searching the literature for evidence, CAVM doctors have become discouraged and ceased

to make concerted efforts to publish in the conventional literature and this is unfortunate indeed.

As an example of the problems faced by those attempting to provide evidence, Epstein recently attempted to publish a very well done case report in a conventional journal. The case report documented complete clinical remission of chronic nasal Aspergillosis in a canine treated with classical homeopathy. The response to therapy was remarkable and note-worthy, but the conventional literature refused to publish the article because the author and client had not done repeated anesthetized imaging and biopsy procedures to document the regression of fungal lesions in the case. The board certified reviewer stated that this was the level of proof required for a new therapy, even though the case was deemed incurable and hopeless and the literature contains not one case of spontaneous resolution. The author and client felt that such "diagnostic" invasion had strong probabilities of depressing immune response and lowering chances of healing. They ethically refused to subject the patient to such invasive and unnecessary practice. (Epstein 2006) Massive medical ethics discussions ensue following such situations and they frequently frustrate CAVM doctors for understandable reasons. Critics respond that they must have adequate evidence before allowing such articles to access respected literature.

Clinical research is not done to satisfy critics, but rather to satisfy our quest for effective knowledge, which has applicability in assisting our patients stay healthier, recover faster, or in providing further options for use by veterinarians in difficult situations. Case reporting is done to establish where something appears to have worked, and how it happened. The CAVM community needs to spend less time battling with professional skeptics and more time documenting and enquiring into our methods and results. In pursuing such activity we forward truthful information for use by others to expand our practices and our profession.

A recent Gallup pole placed veterinarians as the number 3 respected profession by the public (after nurses and pharmacists and before physicians). If our profession continues to offer well thought, results oriented treatments to our patients and clients, we will continue to bask in this popularity. Research, when properly done expands truth and truth properly applied leads to improved survival. At a recent AHVMA meeting Sagiv Ben-Yakir urged people to stop fighting skeptics and associate with Nobel prize winners. That is good advice and publishing well-done clinical case reports is a beginning. If we simply obtained two well done case reports from each modality this year we could rapidly advance the literature available to CAVM. The research committee of AHVMA believes this is possible and hopes this article will move things forward.

CAVM procedures do work. We all see this daily. Because of the increasingly cooperative efforts by board certified referral practices and CAVM practitioners, it is hoped that such barriers to publication will be minimized in the future as more and more cases are occurring which have excellent conventional and alternative documentation. Case reports have been perceived to be less important in the present environment of scientific literature as they form a lower level of scientific evidence. However, case reports are an important area of scientific enquiry and one that is entirely appropriate for the CAVM community.

References

AHVMAa. American Holistic Veterinary Medical Association web site. Research committee. <http://www.ahvma.org/displaycommon.cfm?an=1&subarticlenbr=15>.

AHVMAb. American Holistic Veterinary Medical Association web site. <http://www.ahvma.org/displaycommon.cfm?an=5>.

AVMA web site. 2006. Guidelines: AVMA Guidelines for Complementary and Alternative Veterinary Medicine. http://www.avma.org/issues/policy/comp_alt_medicine.asp.

Cockcroft P, Holmes M. 2003. *Handbook of Evidence-based veterinary medicine*. Blackwell Publishing: Malden, MI.

Epstein S. JAVMA. Aspergillosis article. 2006. Fall/Winter 25(3): ??

Gallup poll. Most trusted professionals. December 14, 2006.
<http://www.galluppoll.com/content/?ci=25888>.

Gray CM, Tan AW, Pronk NP, O'Connor PJ. Complementary and alternative medicine use among health plan members. A cross-sectional survey. *Eff Clin Pract*. 2002 Jan-Feb;5(1):17-22.

Hardin LE, Robertson S. Learning evidence-based veterinary medicine through development of a critically appraised topic. *J Vet Med Educ*. 2006 Fall;33(3):474-8.

Jenicek M. 2001. *Clinical case reporting in Evidence-based medicine*. Oxford University Press: New York.

Kochevar DT, Fajt V. Evidence-based decision making in small animal therapeutics. *Vet Clin North Am Small Anim Pract*. 2006 Sep;36(5):943-59, v.

Schoen A, Wynn S. 1998. *Complementary and Alternative Veterinary Medicine*. Mosby:St Louis, Missouri.

Tindle HA, Davis RB, Phillips RS, Eisenberg DM. Trends in use of complementary and alternative medicine by US adults: 1997-2002. *Altern Ther Health Med*. 2005 Jan-Feb;11(1):42-9.

Working Party of the Royal College of Physicians. Doctors in society. Medical professionalism in a changing world. *Clin Med*. 2005 Nov-Dec;5(6 Suppl 1):S5-40.

Wynn SG, Wolpe PR. The majority view of ethics and professionalism in alternative medicine. *J Am Vet Med Assoc*. 2005 Feb 15;226(4):516-20.