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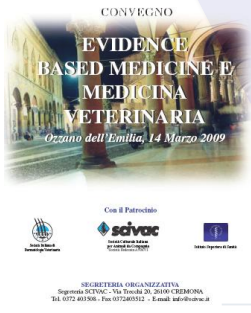
EBVM RCVS October 2012

Aiden P. Foster DipACVD PhD MRCVS
 Honorary Associate Professor in Veterinary Dermatology
 AHVLA Shrewsbury
 With thanks to Tim Nuttall



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Hierarchy of information

Systematic reviews

Randomised controlled trials (RCTs)

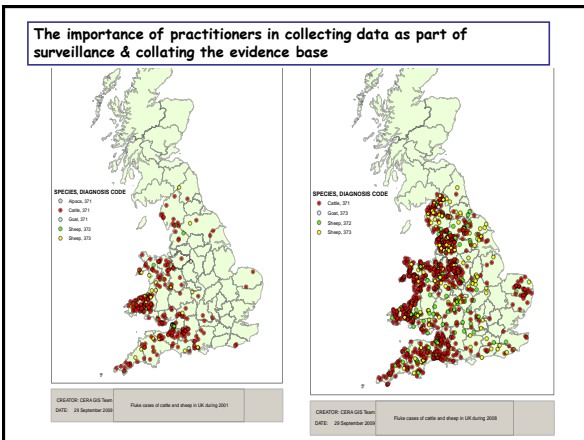
Non-controlled trials

Case series


Individual cases

Anecdote – even expert opinion

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Evidence based medicine



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- To promote 'the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients (animals)'
- International Committee for Atopic Diseases of Animals
- Cochrane Group
- Veterinary Dermatology journal
- Expert Panels
 - Membership?
 - Sponsorship?

- Atopic dermatitis
- Diagnosis
- Therapy
- Demodex
- Leishmania
- Pyoderma
- Malassezia
- Otitis

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Example from canine atopic dermatitis


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Cochrane group


- Olivry, T. et al. Interventions for atopic dermatitis in dogs: a systematic review of randomized controlled trials. *Veterinary Dermatology* 2010; 21: [4-22](#).
- Open Access OA

ICADA

- Olivry T et al. Evidence based veterinary dermatology: a systemic review of the pharmacotherapy of atopic dermatitis. *Veterinary Dermatology* 2003; 14: [121-146](#).

Clinical guidelines

- Olivry T et al. Treatment of canine atopic dermatitis: 2010 clinical practice guidelines from the International Task Force on Canine Atopic Dermatitis. *Veterinary Dermatology* 2010; 21: 233-246. OA


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J Vet Intern Med 2010;24:51-56

A Survey of Evidence in the *Journal of Veterinary Internal Medicine* Oncology Manuscripts from 1999 to 2007

A. Sahara and C. Khanna

Objective: To survey and monitor trends in evidence for oncology manuscripts published in the *Journal of Veterinary Internal Medicine (JVIM)* between 1999 and 2007 based on an evidence-based medicine (EBM) standard.
Methods: All veterinary oncology-related articles published in *JVIM* and 7 other high-impact journals from 1999 to 2007 were collected by database searches. Relevant manuscripts then were characterized including investigator affiliation, subject matter investigated, retrospective or prospective study design, manuscript type, and classifications of manuscripts using an EBM standard.
Results: A total of 172 relevant veterinary oncology manuscripts were identified in *JVIM* between 1999 and 2007. The proportion of oncology manuscripts published each year rose with the total number of manuscripts published in *JVIM* (mean, 13%; range, 8-15%). The author affiliations and subject matter were similar during this evaluation period. Case series represented the most common manuscript type (40%). With the exception of a progressive increase in prospective manuscripts and a reduction in case reports, no significant changes in the classification of manuscripts using EBM standards were seen. During this same period, veterinary oncology manuscripts published in 7 high-impact journals were associated with higher standards of evidence including prospective studies and randomized trials.
Conclusions: The standards of evidence for veterinary oncology manuscripts published in *JVIM* have remained static between 1999 and 2007. This survey provides an informative benchmark for the state of evidence in previous *JVIM* oncology manuscripts and may be useful in identifying specific opportunities that may raise the standards of evidence in future publications in *JVIM*.
Key words: Clinical trials, Evidence-based medicine, Statistics.

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Papers

Review of the safety and efficacy of long-term NSAID use in the treatment of canine osteoarthritis


J. F. Innes, J. Clayton, B. D. X. Lisselles

The published, peer-reviewed literature was systematically searched for information on the safety and efficacy of long-term (defined as ≥30 days or more of continuous therapy) NSAID use in the treatment of canine osteoarthritis. Online databases were reviewed in June 2008 and papers were selected based on their relevance. Fifteen papers were identified and evaluated. Six of seven papers indicated a benefit of long-term treatment over short-term treatment in terms of the reduction of clinical signs or lameness, over 30 days showed no benefit. Sixteen papers evaluated safety with calculated experimental (adverse) event rates (ER) between 4 and 6.7, but there was no correlation between study length and ER ($P = 0.75$). The balance of evidence for the efficacy of NSAIDs supports longer term use of these agents to increased clinical effect. There is indication in the literature that such an approach is associated with a reduction in safety, although robust data on the safety of long-term NSAID use are lacking in large numbers of dogs.

SEARCHING THE VETERINARY LITERATURE: A Comparison of the Coverage of Veterinary Journals by Nine Bibliographic Databases

Douglas J.C., Gilbey & Martin L. Bennett & Rachel S. Deon

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J Vet Intern Med 2010; 24:57-64

Note from the editor: The REFLECT statement is also published in *Journal of Food Protection, Zoonoses and Public Health, and Journal of Swine Health and Production*. The Editorial Board of this journal believes that the contents of this report will be an important forward step in standardizing the design and implementation of randomized clinical trials in animal health and food safety research areas. Authors can use any one of these references when citing REFLECT. Furthermore, the REFLECT Statement should be read in conjunction with the REFLECT Explanation and Elaboration Document, which are available at the REFLECT statement website, <http://www.reflect-statement.org>.


The REFLECT Statement: Methods and Processes of Creating Reporting Guidelines for Randomized Controlled Trials for Livestock and Food Safety

A.M. O'Connor, J.M. Sargeant, L.A. Gardner, J.S. Dickson, M.E. Torrence, and consensus meeting participants: C.E. Dewey, I.R. Dobson, R.B. Evans, J.T. Gray, M. Greiner, G. Keeffe, S.L. Lefebvre, P.S. Morley, A. Ramirez, W. Sischo, D.R. Smith, K. Snader, J. Sofos, M.P. Ward, R. Wills

The conduct of randomized controlled trials in livestock production, health, and food-safety outcomes presents unique challenges that might not be adequately reported in trial reports. The objective of this project was to modify the CONSORT (Consolidated Standards of Reporting Trials) statement to reflect the unique aspects of reporting these livestock trials. A 2-day consensus meeting was held on November 18–19, 2008 in Chicago, IL, to achieve the objective. Before the meeting, a Web-based survey was conducted to identify issues for discussion. The 24 attendees were biostatisticians, epidemiologists, food-safety researchers, livestock production specialists, journal editors, a scientist editor, and associate editors. Before the meeting, the attendees completed a Web-based survey indicating which CONSORT statement items would need to be modified to address unique issues for livestock trials. The consensus meeting resulted in the production of the REFLECT (Reporting Guidelines for Randomized Control Trials) statement for livestock and food safety and 22-item checklist. Fifteen items were modified from the CONSORT checklist, and an additional section was proposed to address challenging trials. The REFLECT statement proposes new terminology, more consistent with common usage in livestock production, to describe study subjects. Evidence was not always available to support modification to or inclusion of an item. The use of the REFLECT statement, which addresses issues unique to livestock trial, should improve the quality of reporting and design for trials reporting production, health, and food-safety outcomes.

Key words: Challenge studies; Livestock; Randomized trial; Standards.

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REFLECT Statement

Table 2. Checklist of items for the REFLECT statement: reporting guidelines for randomized control trials in livestock and food safety.


Paper Section	Reported on
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CARES

Companion Animal Reporting Expectations and Standards (CARES) for studies evaluating therapeutic interventions

Objective/Outcomes	5	Specific objective and hypothesis. Clearly state primary and secondary objectives (if applicable)
	6	Clearly defined primary and secondary outcome measures and the levels at which they were measured, and, when applicable, any methods used to enhance the quality of measurements (eg, multiple observations, training of assessors)
Sample size	7	How sample size was determined and, when applicable, explanation of any interim analyses and stopping rules. Sample size considerations should include sample-size determinations at each level of the organizational structure and the assumptions used to account for any non-independence among groups or individuals within a group
Randomization—sequence generation	8	Method used to generate the random allocation sequence at the relevant level of the organizational structure, including details of any restrictions (eg, blocking, stratification)

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British Journal of Dermatology 2001; 144: 1154–1160

Differences in efficacy between intention-to-treat and per-protocol analyses for patients with psoriasis vulgaris and atopic dermatitis: clinical and pharmacoeconomic implications


R. SCHEFFNER, J. SCHEFFNER-ROHE, M. GERSTENHAUER, F. HOFSTÄDTER, M. LANDTHALER AND W. STOLZ

Department of Dermatology, Cancer Registry Center, Espargaug, Institute of Pathology, University of Regensburg, 93042 Regensburg, Germany

Accepted for publication 21 December 2000

Summary Background: Pharmacoeconomic outcome research is based on three criteria: (i) evaluation of objective therapeutic effects; (ii) quality of life; and (iii) treatment costs. Evaluation of therapeutic effect is mainly based on the results of clinical trials using objective clinical measures, eg: Psoriasis Area and Severity Index (PASI) (score for psoriasis vulgaris) and the Severity Scoring of Atopic Dermatitis (SCORAD) (score for atopic dermatitis). In most studies, only results for a treatment-optimized subpopulation (patients treated according to the protocol) are presented in publications. The relevance of such data for daily routine therapy is doubtful. **Objectives:** Our purpose was to investigate the expected loss of effectiveness of switching from a clinical trial to daily routine therapy for the synchronous application of narrow-band ultraviolet (UV) B phototherapy (311 nm) and bathing in 10% Dead Sea salt solution (synchronous balmotherapy) for patients with psoriasis vulgaris and atopic dermatitis. **Methods:** We conducted a multicentre, uncontrolled observational study of outpatients. To achieve data for 'clinical trial' and 'daily routine' situations, two populations were compared: (i) all patients strictly treated according to the protocol (ATP) with no protocol deviations (data published in clinical trials), and (ii) all patients participating in the study who received active treatment at least once, despite treatment irregularities, non-compliance, early withdrawal or other protocol violations [intention-to-treat population (ITT), model for 'daily routine'].


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Interventions for atopic dermatitis in dogs: a systematic review of randomized controlled trials

- Implications for practice**
 - Which drug
 - Efficacy
 - Cost
- Implications for research**
 - Insufficient evidence of efficacy vs. evidence of no efficacy
 - Variable disease severity
 - Adequate pharmacological data
 - Adequate power data
 - Common outcome measures
 - Longer term studies

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Acta Derm Venereol 2006; 86: 485–497

SPECIAL REPORT

Conflicts of Interest in Dermatology¹

Huyel C. WILLIAMS², Luigi NALDI³, Carle PAUL⁴, Anders VAHLQVIST⁴, Sara SCHROTER⁵ and Roy JOBLING⁶

¹Centre of Evidence-Based Dermatology, Nottingham University Hospital NHS Trust, Nottingham, UK; ²GEDE Study Centre, Opatowitz Street, Bergamo, Italy; ³Department of Dermatology, Pitié-Salpêtrière University Hospital, Paris, France; ⁴Department of Dermatology, University of Turku, Turku, Finland; ⁵Department of Dermatology, University of Ljubljana, Ljubljana, Slovenia; ⁶Editor-in-Chief, *Acta Dermato-Venereologica*, *British Medical Journal*, London, UK, and *The Practitioner*, Association, St John's College, Cambridge, UK

Conflicts of interest exist in dermatology when professional judgement concerning a primary interest, such as research validity, may be influenced by a secondary interest, such as financial gain from a for-profit organization. Conflict of interest is a condition and not a behaviour, although there is clear evidence that gifts influence behaviour. Little has been written about conflicts of interest in dermatology. This series of papers raises awareness of the subject by exploring it in greater depth from the perspective of a dermatology researcher, an industry researcher, a dermatology journal editor, a health services researcher and a patient representative. Collectively, they illustrate the many ways in which conflicts can pervade the world of dermatology publications and patient support group activities. **Key words:** conflicts of interest; dermatology; disease mongering; disease awareness campaigns; ghost authorship.

on the topic of conflict of interest (COI) in dermatology held at the Spring 2006 European Academy of Dermato-Venerology meeting in Finland. It might strike the reader that the topic of COI was an odd one for a meeting that relies so heavily on sponsorship from the pharmaceutical industry. Nevertheless, the session was well attended and received by a wide range of colleagues from academia, clinical practice and industry. It was clear from the discussion that ensued from the perspective of a dermatology researcher, COI in dermatology, that some themes relating to COI and dermatology research output needed to be shared more widely amongst the dermatology community through a journal article. This article therefore represents a compilation of those talks, plus an additional contribution about COI and patient support groups from Roy Jobling, who has progressed and who has worked with patient support

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Veterinary Dermatology

Interventions for atopic dermatitis in dogs: a systematic review of randomized controlled trials

DOI: 10.1111/vvd.12004

Thierry Oligny¹, Aidan P. Foster², Paul S. Miller³, Neil A. Macleod⁴, Christopher Chalmers⁵ and Hywel C. Williams⁶

¹Department of Veterinary Clinical Science, Faculty of Veterinary Science, University of Bristol, Langford House, Langford House, Langford, Wiltshire, UK; ²Department of Veterinary Clinical Science, Faculty of Veterinary Science, University of Bristol, Langford House, Langford House, Langford, Wiltshire, UK; ³Department of Veterinary Clinical Science, Faculty of Veterinary Science, University of Bristol, Langford House, Langford House, Langford, Wiltshire, UK; ⁴Department of Veterinary Clinical Science, Faculty of Veterinary Science, University of Bristol, Langford House, Langford House, Langford, Wiltshire, UK; ⁵Department of Veterinary Clinical Science, Faculty of Veterinary Science, University of Bristol, Langford House, Langford House, Langford, Wiltshire, UK; ⁶Department of Veterinary Clinical Science, Faculty of Veterinary Science, University of Bristol, Langford House, Langford House, Langford, Wiltshire, UK

Abstract

Background: The management of atopic dermatitis (AD) in dogs is controversial. The aim of this systematic review was to assess the effects of interventions for the treatment of AD on clinical outcomes. We identified 1000 RCTs from the Cochrane Database of Systematic Reviews, PubMed, Embase, and Scopus. We included RCTs that compared any intervention with placebo or no treatment. The primary outcome was the proportion of dogs that were cured. Secondary outcomes were the proportion of dogs that were improved, the proportion of dogs that were not cured, and the proportion of dogs that were not improved. We found 1000 RCTs. The most common intervention was antihistamines. The most common outcome was the proportion of dogs that were cured. The most common result was that antihistamines had no effect on the proportion of dogs that were cured. We found no evidence of a difference between antihistamines and placebo or no treatment. We found no evidence of a difference between antihistamines and other interventions. We found no evidence of a difference between antihistamines and placebo or no treatment. We found no evidence of a difference between antihistamines and other interventions. We found no evidence of a difference between antihistamines and placebo or no treatment. We found no evidence of a difference between antihistamines and other interventions.

Conclusion: There is no evidence that antihistamines are effective for the treatment of AD in dogs. We found no evidence of a difference between antihistamines and placebo or no treatment. We found no evidence of a difference between antihistamines and other interventions. We found no evidence of a difference between antihistamines and placebo or no treatment. We found no evidence of a difference between antihistamines and other interventions.

Keywords: atopic dermatitis, antihistamines, systematic review, randomized controlled trial, dogs.

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EBVM - the evidence from review articles

- Responsibility of the author
 - Declare conflicts of interest
 - Consultation and research funding activities
 - Declare sources of funding
 - Use reporting guidelines
 - REFLECT; CARES
- Responsibility of the reader
 - Understand the technical terminology
 - Appreciate the potential weaknesses of RCTs and systematic reviews with meta analysis

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BMJ

BMJ 2012;345:e7396. doi: 10.1136/bmj.e7396 (Published 11 September 2012)

RESEARCH

Risks of harms using antifibrinolytics in cardiac surgery: systematic review and network meta-analysis of randomised and observational studies

OPEN ACCESS

Brian Hutton senior methodologist¹, Lawrence Joseph professor², Dean Ferguson scientist and associate professor³, C David Mazer professor and adjunct scientist⁴, Stan Shapiro professor⁵, Alan Timmouth scientist⁶

¹Clinical Epidemiology Program, Ottawa Hospital Research Institute, Ottawa, ON, Canada; ²McGill University Department of Epidemiology and Biostatistics, Montreal, QC, Canada; ³Department of Anesthesia, University of Toronto and Keenan Research Center in the Li Ka Shing Knowledge Institute of St Michael's Hospital, Toronto, ON, Canada

The future? - analysing and providing evidence
Using mixed treatment comparison to compare interventions: a research synthesis example using antibiotic treatments for bovine respiratory disease.
Annette O'Connor et al. AABP Montreal Sept 2012

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The future? How do we deliver the evidence?

The Veterinary Journal 191 (2012) 11-12

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journal homepage: www.elsevier.com/locate/tvj

Guest Editorial

Evidence is at the core of scientific method: A challenge for clinicians

Evidence ("... facts tending to prove or disprove any conclusion"; OECD, 1989) is at the core of the scientific method, providing the basis for acquiring new and correcting and consolidating existing knowledge. Within the disciplines of veterinary medicine, evidence is generally gathered through experimentation and/or observation, each with its strengths and limitations, with conclusions then being drawn using inductive and/or deductive reasoning (Dobson et al., 2009). The increasing use of systematic reviews and meta-analyses is particularly noteworthy. Systematic reviews seek to

These include guidelines to report randomised controlled trials for livestock with production, health and food safety outcomes (O'Connor et al., 2010) and reporting guidelines for diagnostic test accuracy studies for paratuberculosis in ruminants (Gardner et al., 2011). Several authors have adapted and highlighted the importance of these guidelines in veterinary medical research (Gardner, 2010; More, 2010; O'Connor, 2010) and the *Veterinary Journal* now asks that authors comply with relevant reporting guidelines.

Another issue relates to the use of scientific evidence by clinicians.

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B-Clinical Key Skills:1

Ref. No.	B-CKS.0
Title	Clinical Key Skills
Category and Value	B - 5 CREDITS
Nominal Study Hours	50

CONTENT

1 **EVIDENCE-BASED MEDICINE, CLINICAL REASONING AND CLINICAL AUDIT**

- Welfare assessment in the clinical setting and consideration of all 'five freedoms' when making decisions, for example recognising when an animal is in pain and/or distress, or suffering in any other way
- Understanding basic ethical decision making, including consideration of all stakeholders and cost benefit analysis
- Knowledge of RCVS Guide to Professional Conduct, including animal welfare obligations, informed consent, euthanasia with or without owner consent, breaking client confidentiality, distinction between clinical and scientific procedure, relevant mutations

January 2007
Page 1 of 2

B-Clinical Key Skills:1

- Basic knowledge of relevant legislation, for example species-specific regulations and welfare codes, as well as some understanding of unnecessary suffering
- Critical literature review and authority of sources
- Notice and expert reasoning
- Clinical bias
- Value of numerical data in informed practice.

The future - how do we deliver the evidence?

Undergraduates
Postgraduates
Certificate holders
Specialists
Practitioners

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