Lameness Grading Worthwhile or Futile?

Lameness is a prominent clinical feature present in animals with musculoskeletal disease and injury. Indeed, resolution of lameness is one of the important hallmarks for documentation of a successful treatment. However, objective evaluation and quantitative grading of gait in clinical practice can be challenging.

One of the great, classical studies of animal and human gait was made by Eadweard Muybridge, long before the existence of the movie camera and digital imaging. By collating series of black and white photographic images made in rapid succession using a special camera, Muybridge was able to capture the various gait phases at the walk, trot and gallop in many different animal species. More than a hundred thousand photographic plates were used by Muybridge in the preparation of "Animal Locomotion", published in 1887 under the auspices of the University of Pennsylvania. Selections of Muybridge’s work have been reprinted from time to time, and I marvel at this man’s amazing ingenuity and sheer determination, so evident in this body of work (1).

Ideally gait and lameness are now more precisely studied and quantified by computerized gait analysis and the force plate, but the use of this methodology is not always possible or practical in clinical studies. Consequently, subjective visual assessment to assign grades of lameness is still widely used and reported in clinical publications. However the findings of several investigations suggest that subjective grading of lameness in dogs should be interpreted with care, unless the lameness is very severe (2, 3). There seems to be many different lameness grading schemes in use. In a brief review of several text books covering the topic of lameness, I found lameness grading schemes that had scales of 1-4, 0-5, and 0-10 (4-6). Furthermore, a search of recent papers published in VCOT reveals that there are innumerable other lameness grading schemes in use as well. It led me to wonder if all these different lameness grading schemes are equally deficient in terms of their repeatability and agreement amongst examiners, or with the force plate data. Why do we need so many different grading schemes? Are they all of little value? Perhaps certain lameness grading schemes are better for particular types of musculoskeletal disorders.

It must be mentioned that the study of lameness is very dear to the heart of our Emeritus Editor-in-Chief, Professor G. Sumner-Smith. He also is acknowledged as being the one who brought the idea of a World Veterinary Orthopaedic Congress to two veterinary orthopaedic societies – the European Society of Veterinary Orthopaedics and Traumatology (ESVOT) and the Veterinary Orthopedic Society (VOS). The guest editorial in this issue of VCOT was contributed by the organizing committee for our next World Congress in 2014. It promises to be an outstanding congress. I encourage you to put this congress on your calendar and start making your plans to attend.

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References