Cincinnati Orthopaedic Disability Index in canines

Description

**General description:** The Cincinnati Orthopaedic Disability Index (CODI) is a case-specific questionnaire completed by owners of dogs with orthopaedic disease, to measure individual functional status of the dog (Gingerich and Strobel 2003). Owners are asked to describe activities which are restricted in their dog due to the orthopaedic condition and each activity is categorised for severity by the owner.

**Instructions and scoring:** After nomination of the restricted activities, owners are asked to prioritise five activities which they feel are most restricted in the dog. Each activity is rated and scored as either ‘no problem’ (0), ‘a little’ (1), ‘quite a bit’ (2), ‘severe’ (3 points), or ‘impossible’ (4) points. The scores are added for all 5 activities with a maximum possible total score of 20 points. Higher scores indicate greater functional restrictions than lower scores. On subsequent assessments, owners are asked to score the previously nominated activities, so that changes in functional restrictions can be monitored over time.

**Reliability, validity and sensitivity to change:** The reliability and validity to change of this outcome measure has not been identified. However, the original paper which reported the CODI found it to be sensitive in detecting change when investigating the effects of a neutraceutical on orthopaedic functional restrictions in dogs (Gingerich and Strobel 2003).

Commentary

To date, the use of standardised subjective and objective outcome measures in veterinary science and animal physiotherapy has been limited, although the need for the development of such measures to enhance evidence-based practice has been highlighted (Cook 2007). In order to overcome this deficit, outcome measures which have been shown to be reliable and valid in human physiotherapy are now being adapted for use in companion animal rehabilitation practice by veterinarians and physiotherapists to improve outcomes-based practice (Hesbach 2007). The CODI is an example of an outcome measure designed for use in animals after review of functional outcome measures used for the assessment of humans with arthritis. Specifically, the CODI was based around the McMaster-Toronto Arthritis scale (MACTAR) and the Western Ontario McMaster Universities Osteoarthritis Index (WOMAC) (Gingerich and Strobel 2003). The MACTAR and WOMAC measure functional status of patients with rheumatoid and osteoarthritis and have been shown to be valid and highly responsive in assessing change in function in patients with arthritis (Verhoeven et al 2000).

Examples of the most commonly reported functional restrictions in the original study using the CODI included inability of the dog to go on long walks, difficulty walking on slippery floors, getting in and out of the car, retrieving toys, playing with other animals, and jumping onto furniture (Gingerich and Strobel 2003). The CODI was reported to be sensitive in detecting changes in these functional restrictions. Unfortunately, no other studies were identified which used the CODI in dogs; however, a similar scale has been used to measure functional outcomes in orthopaedic disease in cats (Duncan et al 2007). Although this functional outcome measure was called the Client Specific Outcome Measure (CSOM), it is identical in categories and scoring to the CODI. Additionally, the CSOM highlights the need for the chosen restricted activities to be time and place specific, thus indicating that there is a need for the activity to be quantifiable. Examples of time and place quantifiable restricted activities may include the cat having the ability to jump onto the sofa, or get up the stairs at the end of the day.

Both the CODI and the CSOM were reported as being useful tools in the assessment of functional outcomes in small animals, but further evidence is required to identify the validity, reliability, and sensitivity of these measures. The use of valid, reliable, and appropriate outcome measures to monitor physiotherapy intervention is a standard set by the Australian Physiotherapy Council (APC 2006) and identified in the Australian Physiotherapy Competency Standards 1994–2002 as an integral component of professional accountability (APA 2003). The development and use of standardised outcomes in animal physiotherapy will enhance animal physiotherapy best practice and raise the profile of the efficacy of animal physiotherapy.

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References