

Session 524 - Pain Models: Behavior

## 524.26 / RR9 - Validation of a translational pain questionnaire assessing behavioral quality of life measures in a naturalistic canine model of osteoarthritic pain and urate-induced pain

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Halls B-H

### Authors

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### Disclosures

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### Abstract

Evaluation of pain in animal models typically relies on responsive measures, such as withdrawal reflexes from noxious stimuli. Because affective pain measures relevant to quality of life often are not included or not available, the translational value of animal models of pain is limited. In the current study, a questionnaire assessing pain during performance of standard daily functions was validated using approved NSAID pain therapeutics in both naturalistic and induced canine models of pain. Specifically, the naturalistic canine model employed aged dogs with radiographic evidence of osteoarthritis scored by a veterinary radiologist and the induced model employed injection of sodium urate into the stifle of normal dogs. Both models were used to evaluate the utility of the pain questionnaire under control conditions compared to treatment with meloxicam, which is approved for human and veterinary use. For both models, the questionnaire evaluated functional ability and observable pain of dogs performing standard behaviors such as walking, trotting, galloping, stepping over obstacles, climbing and descending stairs, rearing for food and jumping down from a perch. In aged dogs with naturally occurring osteoarthritis, treatment with meloxicam (0.1 mg/kg PO and 0.4 mg/kg SC) reduced measures of pain compared to negative control and also when compared to the first day of treatment. Moreover, injection of sodium urate into the stifle joint produced a significant increase in pain evident 4, 8 and 24 hours after injection. Treatment with meloxicam (0.2 mg/kg PO) significantly decreased pain measures at all the same time-points. This demonstrates that meloxicam, administered according to the veterinary approved labeling reduces pain measured by the quality of life based questionnaire used in the current study. Therefore, the improvement in pain observed under meloxicam validates the pain questionnaire used in the current study. Given meloxicam improves measures of pain in both dogs and humans, the pain questionnaire may provide a translational assessment of affective pain that is clinically translational. Additional studies are required to extend the utility of the current model beyond effects of NSAIDS.