

## **Transmucosal Buprenorphine Provides Analgesia in Feline Gingivostomatitis**

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November 3, 2018 - Buccal administration of buprenorphine provides analgesia in cats with oral disease, a study has found.

Thaleia-Rengina Stathopoulou, DVM, MVetMed, with the Royal Veterinary College, UK, and colleagues reported their findings in the August 2018 issue of *Journal of Feline Medicine and Surgery*.

Previous studies have shown transmucosal buprenorphine to have comparable bioavailability and analgesia with other routes. Stathopoulou and colleagues aimed to assess whether oral inflammation affects the absorption and analgesic efficacy of buprenorphine in cats.

A total of 6 cats with chronic gingivostomatitis were recruited and randomised into two groups. A multidose formulation of transmucosal buprenorphine at 0.02 mg/kg was administered to Group A, and 0.9% saline was administered to Group B. Plasma buprenorphine concentrations, pain scores and food consumption were measured at 30, 90 and 360 minutes.

Pain scores showed a significant decrease between baseline and after buprenorphine at 30 mins ( $P = .0007$ ) and 90 mins ( $P = .011$ ). Similarly, a significant decrease was observed between saline and buprenorphine at 30 mins ( $P = .04$ ) and 90 mins ( $P = .04$ ), but not at 360 mins ( $P = 0.09$ ).

Comparing the results with those obtained in normal cats in previous studies, researchers found that cats with gingivostomatitis had lower bioavailability and shorter absorption half-life of buprenorphine after transmucosal administration.

Hypersalivation and mydriasis were recorded as adverse reactions after buprenorphine administration. No major adverse events occurred.

The authors acknowledged that the small sample size and the lack of a validated oral pain scoring system were study limitations.

Transmucosal buprenorphine provided safe, effective analgesia in cats with chronic gingivostomatitis, and authors concluded that it “can be incorporated in [the] multimodal analgesia plan” of this “chronic, devastating and painful condition”.

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Reference: Stathopoulou TR, Kouki M, Pypendop BH, Johnston A, Papadimitriou S, Pelligand L. Evaluation of analgesic effect and absorption of buprenorphine after buccal administration in cats with oral disease. *J Feline Med Surg*. 2018;20(8):704-710. doi: 10.1177/1098612X17727234.