INTRODUCTION

- Periodontal disease (PD) is common and produces pain with potential impact on nutritional status and quality of life of cats. 1,2
- This study aimed to evaluate pain scores, analgesic requirements and food intake between cats with minimal or severe PD before and after treatment.
- The hypotheses were: 1) cats with severe PD would have higher pain scores and analgesic requirements than those with minimal PD, 2) pain scores would correlate with dental parameters and 3) cats with severe PD would have less food intake than those with minimal PD.

MATERIALS & METHODS

- Ethics committee: 17-Rec-1890
- Study design: Prospective, blinded clinical trial
- Animals: Twenty-four cats (11 males and 13 females) from local shelters were divided into two groups (minimal or severe PD) based on a scoring system (Figure 1).

Treatment of oral disease: Cats were admitted on day 0. They underwent general anesthesia (acepromazine, hydromorphone, propofol, isoflurane, meloxicam and dental nerve blocks with bupivacaine) on day 1 for treatment of oral disease. Cats were discharged on day 6; meloxicam was administered up to day 4 (0.05 mg/kg PO at day 2-4).

- Pain assessment: Pain assessment was performed by an observed who was blinded to disease severity using the Glasgow composite measure pain scale-feline (CMPS-F)2 (Figure 2). Rescue analgesia was administered if scores ≥ 5/20 using hydromorphone at 0.05 mg/kg (IV) or 0.1 mg/kg (IM).

- Food intake evaluation: Cats were fed dry a and wet b food according to Figure 2. Total amount (100%) of food/day was calculated based on the following equation (kcal): 70 × body weight (kg)16,17. Cats were offered 33.3% of their daily total amount at each time point. Food intake (%) during 3 hours and 2 hours were calculated for each time point and each day/cat. Any remaining food was removed after 2 hours.

- Statistical analysis:
  - CMPS-F scores were compared between baseline and each time point using the Cochran-Mantel-Haenszel test for repeated measurements.
  - Correlations between CMPS-F scores on the morning of day 2 and dental parameters were evaluated using Spearman’s correlation.
  - Prevalence and frequency of rescue analgesia were compared using the exact chi-square test.
  - Food intake was compared using a linear mixed model with Benjamini-Hochberg sequential adjustment procedure for multiple comparisons (p < 0.05).
  - CMPS-F scores and food intake obtained within 2 hours of IV and within 6 hours of IM injection after rescue analgesia were excluded from the statistical analysis.16

RESULTS

- Demographic data, prevalence and frequency of rescue analgesia and results of CMPS-F are shown in Tables 1 and 2, and Figure 3, respectively.
- CMPS-F scores were positively correlated with number of tooth extractions, gingival index, and calculus index (r = 0.80, 0.70 and 0.48, respectively).8
- The severe disease group had lower wet food intake during 3 minutes at 2 and 6 hours post-operative (day 1), evening of day 3 and morning and evening of days 4 and 5 when compared to the minimal group (p ≤ 0.0004, respectively). Wet food intake was higher in the minimal group at 6 hours post-operative and lower in the severe group on the morning of day 4 (p = 0.001). Wet food intake was higher in the minimal group at 6 hours post-operative (p = 0.001). Wet food intake was lower in the severe group when compared with baseline.
- Results of wet food intake during 3 minutes and 2 hours/day and dry food intake during 3 minutes and 2 hours are shown in Figure 4.

CONCLUSIONS

- Long-term analgesia is required after treatment of severe oral disease in cats. This condition impacts food intake before and after treatment.

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REFERENCES