**Long acting injectable methadone for post-operative analgesia**

Zackery Bieberly, Butch KuKanich, Kate KuKanich, Kara Berke, Emily Klocke, David Upchurch, Brad Crauer, Alyssa Comroe, Maria Jugan, Diane Mason, Gina Jensen, Ron Orchard, Kelsey Decker, Joshua Klutzke, Ally Fitzgerald, Kallie Woodruff

Department of Anatomy and Physiology (Bieberly, B KuKanich, Klutzke, Fitzgerald) and Department of Clinical Sciences (K KuKanich, Berke, Klocke, Upchurch, Crauer, Comroe, Jugan, Mason, Jensen, Orchard, Decker, Woodruff), College of Veterinary Medicine, Kansas State University, Manhattan, Kansas.

Current injectable opiates for postoperative dogs require frequent injections to maintain adequate analgesia. This study was performed to assess the efficacy of injectable methadone with fluconazole as a long acting analgesic in post-operative dogs. The hypothesis is methadone with fluconazole will provide 24 hours of analgesia with 2 doses compared to 4 doses of standard methadone injection. The targeted enrollment is 40 healthy dogs; 42 enrolled dogs were blocked based on weight and randomly allocated to two treatment groups. Pre-operative assessments included the Glasgow Composite Pain Scale (GCPS) and sedation assessed as none, slight, moderate, profound or unresponsive. The positive control group received subcutaneous 0.5 mg/kg methadone q4h. The experimental group received subcutaneous 0.5 mg/kg methadone with 2.5 mg/kg fluconazole, repeated once at 6 hours. All dogs received acepromazine, propofol induction, and isoflurane anesthesia. Routine ovariohysterectomies were performed by experienced surgeons between 8 AM and 12 PM. Dogs were monitored following surgery using the GCPS and sedation scale. There were no significant differences in postoperative GCPS scores between groups. One dog (methadone/fluconazole) received rescue analgesia, however treatment failure was not significantly different between groups. All dogs were able to walk (moderate sedation or less) by 1 PM (methadone/fluconazole) and 4 PM (methadone STD) the day of surgery. Sedation was completely resolved in both groups at 5 PM the day after surgery. Methadone with fluconazole was able to achieve adequate analgesia with half the doses of standard methadone. This should increase compliance and feasibility in veterinary clinics.

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