Long acting injectable methadone for post-operative analgesia

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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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