

Title: Analgesic Efficacy of Encapsulated Kratom as an Adjunct for Postoperative Pain Management in Dogs

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Abstract:

The options for multi-modal acute pain management are limited in dogs and no studies detail the efficacy of encapsulated kratom for postoperative pain management.

Eight healthy female intact beagles were included following IACUC approval and randomized into placebo and encapsulated kratom groups. Each dog underwent a routine ovariohysterectomy and venous access port placement into the jugular vein. Either placebo or encapsulated kratom was administered at a mitragynine target dose of 1 mg/kg by mouth preoperatively and every 8 hours postoperatively for 5 days and all dogs received carprofen postoperatively for 7 days. Activity and vitals collars were placed acquiring data for 5 days preoperatively and 5 days postoperatively. Glasgow pain scoring was performed every 4-6 hours postoperatively for 5 days.

The median intraoperative fentanyl dosing was 4.95 mcg/kg (2.5-6 mcg/kg) in the placebo group and 3.01 mcg/kg (0-5 mcg/kg) in the kratom group. Postoperative recovery was smooth in 1/4 (25%) of placebo dogs and 4/4 (100%) of kratom dogs. The median cumulative pain score was 34.5 (31-52) and 27.5 (15-46), for the placebo and kratom groups respectively. Mean activity levels were 55.6 and 30.5 preoperatively and 48.58 and 45.25 postoperatively for the placebo and kratom groups respectively.

This study suggests that dogs administered encapsulated kratom needed less intraoperative fentanyl rescue and had a smoother recovery compared to the placebo dogs. Overall, cumulative pain scores were also lower in the kratom group compared to the placebo group. Postoperative activity levels increased for the kratom group and decreased for the placebo group.