Alfaxalone Sedation in Black-Cheeked Lovebirds (Agapornis Nigrigenis) for Noninvasive Procedures

Eva Maria Greunz, DVM, Dafne Limón, DVM, Mads Frost Bertelsen, DVM, DVSc, Dipl ACZM, Dipl ECZM (Zoo Health Management)

Abstract: Alfaxalone is an injectable neuroactive steroid anesthetic that is gaining use as a sedative in many animal species. The purpose of this study was to evaluate the efficacy of alfaxalone for sedation during handling and non-invasive medical procedures in black-cheeked lovebirds (Agapornis nigrigenis). Based on a pilot study that showed that 5 mg/kg alfaxalone was inadequate, and that 20 mg/kg resulted in respiratory arrest in 1 bird, the effects of 12.6 ± 0.9 mg/kg alfaxalone administered subcutaneously was investigated in 9 birds. Despite minor movements and twitching, it was possible to handle and perform positioning for a ventrodorsal radiograph of all birds that were provided the neuroactive steroid anesthetic. A loss of reaction to noxious stimuli was not achieved during sedation. Times from injection to initial effect (mean ± SD) was 93 ± 48 seconds, to recumbency 209 ± 70 seconds, to first handling for positioning the bird in lateral recumbency 251 ± 68 seconds, to initial righting effort 55 ± 8 minutes, and to perching for a minimum of 20 seconds 76 ± 7 minutes. Median respiration rates between 5 to 45 minutes were 36 to 40 bpm, and apnea was not noted in any bird. Birds received 0.5 L of oxygen/minute via face mask following the alfaxalone injection. Oxygen saturation (SpO₂) and pulse rate were measured via pulse oximetry in 8 birds continuously from 10 to 30 minutes with SpO₂ values remaining above 90% during this time. While sedated, the mean pulse rate of the lovebirds decreased significantly over time (P = .007; 10 minutes = 409 ± 81 bpm; 30 minutes = 324 ± 25 bpm). The majority of birds administered alfaxalone in this study did not have smooth induction and recovery periods. This may have been minimized if the subject animals had been placed in a more confined space. Based on the results of this research investigation, 12.6 mg/kg alfaxalone provided nearly 1 hour of stable, non-analgesic sedation appropriate for noninvasive procedures in black-cheeked lovebirds.