

Abstract

Midazolam as an Adjunctive Therapy for Capture Myopathy in Bar-tailed Godwits

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Introduction

In October 2008, subsequent to a cannon-net capture using an entanglement net, 20 out of 197 Bar-tailed Godwits developed clinical signs of capture myopathy including ataxia, depression, leg paresis/ inability to stand, trembling and increased respiratory rate.

Methods

The 20 birds were brought to the New Zealand Wildlife Health Centre (NZWHC) and were randomly assigned to Treatment and Control groups. All birds were treated with 10ml subcutaneous fluids (0.9% NaCl) twice daily, 8ml of oral Wombaroo insectivore mix (Wombaroo Food Products, Adelaide, Australia) twice daily, 0.1mg/kg meloxicam (Metacam oral solution 1.5mg/ml, Boehringer Ingelheim, Auckland, New Zealand) orally once daily and twice daily slinging for up to 1.5 hours. The treatment group was additionally treated with intramuscular midazolam (Midazolam Injection, Pfizer Animal Health, Auckland) at 1.5mg/kg twice daily. A blood sample was taken daily and measured for creatinine kinase (CK) aspartate aminotransferase (AST), electrolytes, PCV, Total Protein and Uric Acid. All birds were housed together and were also given ad libitum access to insectivore mix, oxheart strips and mealworms/ earthworms.

Results

5 control birds and 2 treatment birds died, while the remainder were released over a period of 1 – 9 days. Birds treated with midazolam showed improved tolerance of handling and slinging. Clinical parameters were not statistically different between the two groups. All birds lost a considerable amount of weight despite force feeding and would only self-feed once they were ambulatory. 9 of the 13 released godwits had identification tags, allowing for some post-release monitoring. Lack of waterproofing and predation were contributing causes to death of at least two birds subsequent to release.

Conclusions

Midazolam is a benzodiazepine with the effects of anxiolysis, muscle relaxation and sedation and in this trial has shown subjective benefits in the treatment of birds affected by clinical capture myopathy. Further research into the treatment of clinical capture myopathy and maintenance of weight in captivity of Bar-tailed Godwits is warranted.