Introduction

Gastrointestinal ileus and anorexia/hyponexia are common in rabbits and are often clinically managed by administering drugs with prokinetic effects.

Comparative studies investigating the significance of the effects of these drugs are limited and most studies evaluate only one drug at a time.

- In human studies, cisapride has been shown to increase gastric emptying.¹
- Pyridostigmine has also been shown to have prokinetic effects in human patients.²,³
- Capromorelin has been proven to increase food consumption and body weight in cats and dogs, but studies in rabbits are limited.⁴,⁵,⁶

Objective

To determine the effects of oral prokinetics (metoclopramide, cisapride, pyridostigmine) as well as an oral appetite stimulant with prokinetic effects (capromorelin) on food and water intake, and fecal and urine output in comparison to an oral placebo (saline) in rabbits.

Methods

Study Design: Blinded, complete cross-over randomized controlled trial, approved by the OSU IACUC

- Ten healthy New Zealand white rabbits were assigned to receive a total of 5 treatments over a period of 10 weeks.
- Baseline food and water intake, and fecal and urine output were recorded.
- Drug administration occurred on day 0, and intake and output assessment repeated for 3 additional consecutive days.
- A minimum of a 72-hour rest period was implemented between trials.

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Results

Figure 1: Comparison of food consumption before (Day -1 to 0) and after (Days 0 to 3) drug administration. Capromorelin had the most substantial effect on food consumption.

Figure 2: Comparison of weight of fecal output before (Day -1 to 0) and after (Days 0 to 3) drug administration. Capromorelin had the most substantial effect on total fecal weight.

Figure 3: Comparison of the number of fecal pellets produced before (Day -1 to 0) and after (Days 0 to 3) drug administration. Capromorelin had the most substantial effect on the number of fecal pellets produced.

Conclusion

Preliminary results showed that capromorelin had a more substantial effect on select gastrointestinal physiologic parameters than did the other prokinetic agents. It caused a more substantial change in both food consumption and fecal output than did any of the other drugs evaluated in this study.

References