Effects of a Supplement Containing CBD on Sedation, Ataxia and Equine Health Parameters

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Fig. 1: Experimental design of the 56-day feeding of a supplement containing 150 mg, CBD. D=day; E1=Recording of weekly sedation and ataxia scores and body weight; E2=Physical exam and blood work.

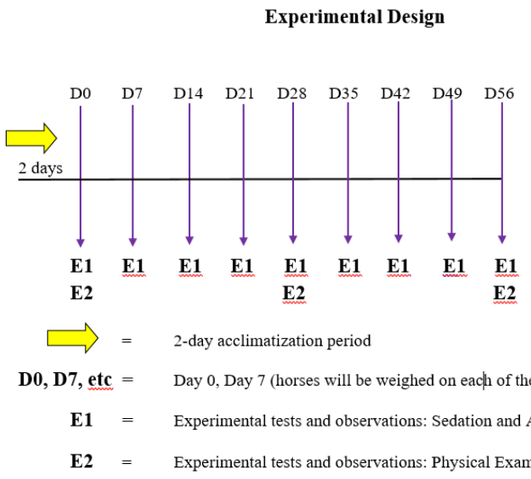


Table 1. Sedation Scores

0	No sedation (normal movement, normal ear and neck position, normal posture)
1	Mild sedation (slightly decreased frequency and rapidity of movement, lowered ear and neck, lip drooping, slightly relaxed postural tone)
2	Moderate sedation (moderately decreased frequency and rapidity of movement, ear tip separation, neck position below the horizontal plane)
3	Deep sedation (prolonged periods of immobility, pronounced ear tip separation, loss of postural tone, base wide stance)

Table 2. Ataxia Scores

0	Normal (no ataxia)
1	Subtle ataxia that may get worse with head elevation
2	Moderate ataxia noted at a walk
3	Ataxia easily seen at a walk and much worse when animal is going around obstacles or head is elevated
4	Severe ataxia that is easily seen at a walk falls or nearly falls at a walk or when performing normal activities.
5	Recumbent (down and unable to get up) horse

Fig 2. Average sedation scores showing very few horses with scores 1 or 2. Scores on the line are 0. No significant differences were seen between treated (A) and controls (B). (All Scores ≤ 2)

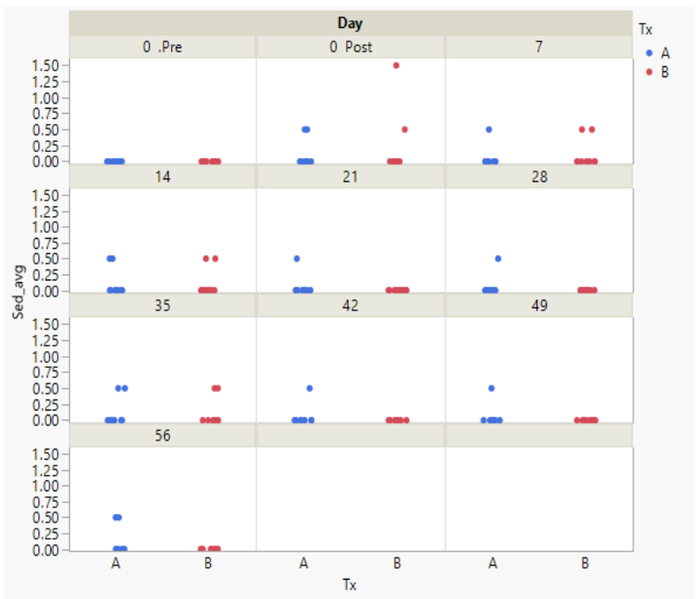
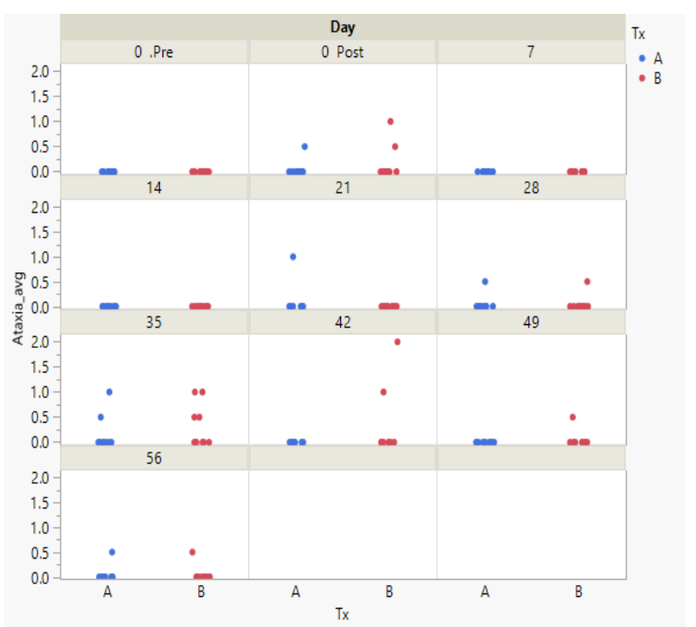


Fig 3. Average ataxia scores showing very few horses with scores 1 or 2. Scores on the line are 0. No significant differences were seen between treated (A) and controls (B). (All Scores ≤ 2)



Introduction

Supplements containing cannabidiol (CBD) have recently been introduced to the horse market, but few research studies investigating its effect in horses have been published; however, research into this novel supplement ingredient lags behind its commercial availability. In addition to safety and dosing, researchers are looking at the impact of CBD on comfort, mobility, behavior and confidence. The purpose of this study was to determine if a supplement containing CBD leads to negative mental (sedation) or physical effects (ataxia), or negative changes in other health parameters, in horses 2 hours after daily administration for 56 days.

Materials and Methods

Twenty clinically healthy adult Thoroughbred horses were housed in stalls for 56 days. Before treatment was initiated, blood work (CBC and biochemical panel) was evaluated and horses were examined for sedation (mental status) and ataxia (incoordination) then randomly divided into two treatment groups, treated (supplement pellets containing CBD, 150 mg) or control (supplement pellets without CBD) (Fig 1). Horses were treated daily and sedation (Table 1) and ataxia (Table 2) scores were assigned by two masked observers once weekly for 8 weeks. Horses were monitored daily for clinical signs or adverse events. Blood work was also evaluated on days 28 and 56, two hours after administration of the supplement.

Results

The supplement was readily consumed by the horses and no adverse effects were seen over the treatment period. Sedation (Fig 2) and ataxia (Fig 3) scores were near zero for most horses during the weekly examinations and there was no statistical difference between treatment groups (Figs 2&3). There were no treatment effects on blood values, including indicators of anemia and blood proteins, liver enzymes, kidney values, electrolytes or calcium. Body weight significantly increased in all horses, treatment as well as control, by Day 56 compared to Day 0 but no treatment effect was noted.

Conclusion

- The CBD supplement (150 mg) was readily consumed and safe.
- The CBD supplement did not cause sedation or ataxia 2 hours after feeding, when CBD blood levels peak, as shown by other studies.[1]
- The CBD supplement did not result in negative changes in mentation, gait, or other health parameters in horses, and no adverse signs were observed after 56 days of administration.

References:

[1]Collins, A., Davis, A. J., Porr, S. (2020) Pharmacokinetics of a single feeding of pelleted cannabidiol in horses. Murray State University, M.S. Thesis.

LSU does not endorse any products.