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Aim

Measure the effect of having a dummy teat on stress levels in young dairy calves recently separated from their mothers

Introduction

- In dairy calves weaning (nutritional and separation) is extremely stressful (Phillips, 2002)
- A recognised measure of stress in farm animals is heart rate variability (HRV), here using the Polar™ Equine heart monitor (von Borell, et al., 2007), a lower HRV signified increased stress
- Weaning stress was reduced by having access to dummy teats (Budzynska and Weary, 2008)
- Cortisol (the stress hormone) declines in calves during sucking (Lupoli, et al., 2001)

Materials and Methods

- 17 Friesian dairy calves (8 bulls and 9 heifers) age range 2-15 days old
- Housed individually in solid sided pens (Fig.2)
- Dummy teats were attached to a wooden board fixed inside the pen door (Fig.4)
- Each calf was either given a teat or not for 1 week
- All calves had a Polar™ heart monitor applied daily for at least 20 minutes to measure HRV

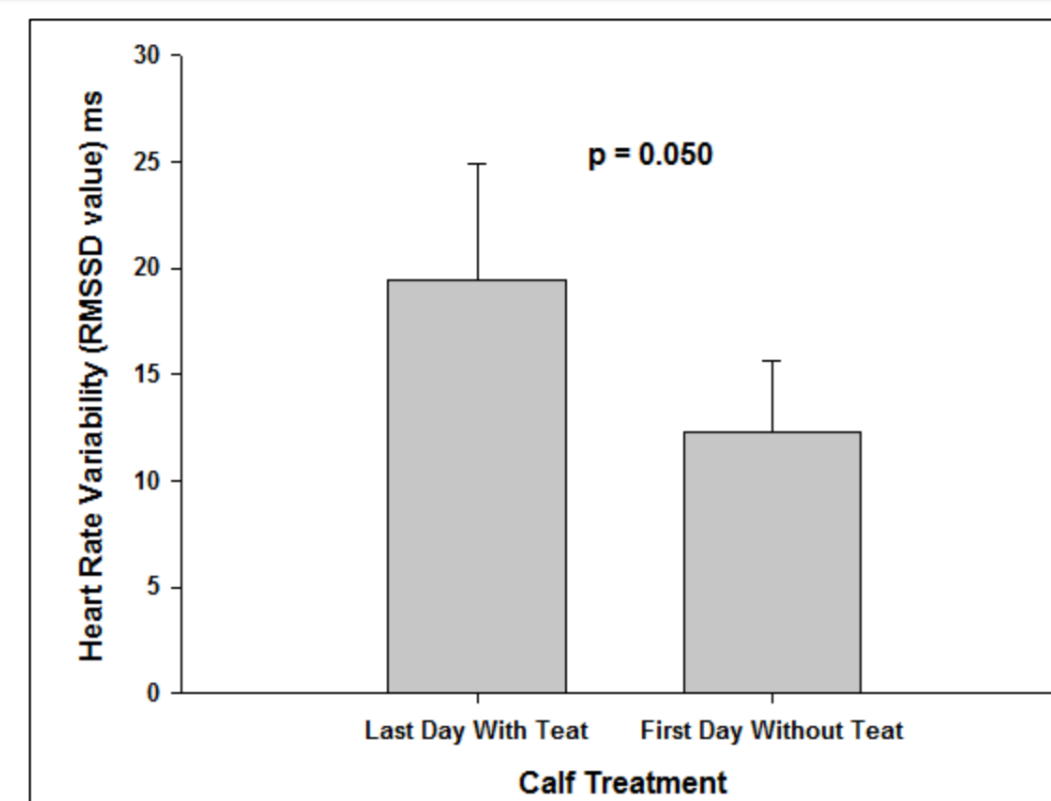


Fig.1. HRV significantly declined after teat removal



Fig.2. Calf actively sucking on teat



Fig. 3. Calf exhibiting stereotypical behaviour



Fig. 4. The constructed dummy teat

Results

- From the outset, the calves actively used the teats
- Farm staff reported that having teats did not interfere with the transition to bucket feeding
- HRV increased significantly for both calves with and without teats $p=0.032$ and $p=0.006$ respectively
- Removal of teats significantly reduced HRV $p=0.050$ (Fig.1)
- Stereotypical behaviours were exhibited when teats were removed e.g. tongue rolling and bar biting (Fig.3)

Conclusions

- Stress levels declined in calves with and without dummy teats suggesting teats were not the cause
- The calves were significantly stressed following teat removal, suggesting addiction or dependence
- From not interfering with management and being attractive to the calves, dummy teats may provide a suitable form of enrichment

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