

that in clinical cases of coliform infections present on the first culture when clinical mastitis was detected, nearly half were still present at 5 to 7 days later. *Klebsiella* infections were more persistent than *E. coli*. The heavier the growth on the first culture isolation, the more likely the infection was to persist (74%). Although recent studies² suggest the need for systemic antibiotics in severe cases, intramammary therapy may also be indicated.

References

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Effects of Dystocia on Dam Health and Productivity

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Introduction

The effects of dystocia on dam health and productivity are rarely monitored on dairy farms. It is highly likely that the effects of dystocia on health and production are substantial. The objectives of this year-long longitudinal study were to measure proportion of dams experiencing dystocia on three Front Range Colorado dairies and evaluate associations with dam productivity, morbidity and mortality.

Materials and Methods

A total of 6,528 calvings were recorded from October 2001 to October 2002 on three well-managed Holstein dairies. Each dam was assigned a dystocia score based on calving ease. Dystocia scores ranged from 1 to 3 (1=no assistance, 2=mild traction, 3=severe traction or surgery). Dams were categorized as primiparous (2350 head) or multiparous (4178 head). Morbidity, mortality and production parameters were monitored for each dam for the entire lactation following the calving event. A logistic regression model was used to calculate odds ratios, using dystocia score 1, dairy number 3 and multiparous as the referent categories. The model accounted for the covariate effects of dairy and lactation. Odds ratios were calculated for treatment of uterine disease (including retained fetal membranes, metritis and pyometra), respiratory disease, mastitis, being sold or dying within two weeks of calving, and during the entire lactation. Milk production (MP) to 30 days in milk, MP to 90 days in milk, mature equivalent 305-day MP and reproductive parameters were recorded. A generalized linear model was used to determine significant differences in milk production associated with dystocia score while controlling

for dairy and parity. Data collection will continue until all cows have completed the current lactation or leave the herd for any reason.

Results and Conclusions

The percent of animals requiring assistance was significantly different between primiparous and multiparous animals ($P < 0.0001$). Overall, 62.7% of all animals calved without assistance. Fifty three percent of primiparous heifers required calving assistance while 29% of multiparous cows required assistance. The proportion of dystocia scores 1 and 2 were significantly different among the three dairies. Dams with dystocia score 3 were more likely to experience uterine disease (odds ratio 2.3), respiratory disease (OR 1.5), to be sold during the lactation (OR 1.6) or die within 2 weeks of calving (OR 4.0) compared to dams with dystocia score 1. Dams experiencing dystocia were not at increased odds of experiencing mastitis. Cumulative milk production to 30 days in milk was significantly decreased for dystocia score 3 compared to scores 1 and 2 ($P < 0.0001$). Cumulative milk production to 90 days was not significantly different among dystocia scores.

Dystocia rates in the studied dairies were high, with a greater occurrence in primiparous compared to multiparous dams. Dystocia was strongly associated with increased morbidity and mortality in dams. Although milk production to 30 days in milk was significantly lower for dams experiencing dystocia, these effects did not continue into later lactation, as cumulative 90-day milk production was not significantly different among dystocia scores. Dystocia is a significant and often underappreciated problem on many dairy operations.