THE EFFECT OF DYSTOCIA ON THE FEEDING AND STANDING BEHAVIOR OF HOLSTEIN DAIRY COWS

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Dairy cows often experience difficult calvings (dystocia). Cows that experience dystocia are likely to develop health complications after calving, negativity impacting their productivity and welfare. However, it is unclear how dystocia affects cow behavior during the calving period. The aim of this study was to describe the impact of dystocia on dairy cow behavior. Individual dry matter intake (DMI), time spend feeding, standing time and the number of standing bouts were recorded from 4 d before to 2 d after calving for 101 Holstein dairy cows. Ten cows were classified as "dystocia" where at least two experienced farm workers were required to assist during the delivery. These cows were parity-matched with 10 "healthy" cows that required no assistance during parturition. Cows were video taped to determine the time of parturition and provided a new diet formulated for lactation immediately after calving. A mixed model in SAS that included parity and dystocia as fixed effects was used to determine differences in feeding and standing behavior. Dystocia cows ate, on average, 2.1 kg less than healthy cows in the 3 d before calving (13.5 vs. 11.4 kg/d, SED = 0.6, P = 0.01, Figure 1). This difference contributed to a total of about 6.4 kg less consumed by dystocia cows in the 3 d before calving (34.2 vs. 40.6 kg/3d, SED = 2.2, P = 0.06). Cows with dystocia also tended to have a larger increase in intake between the 24 hr before calving and the 24 hr after calving compared to healthy cows (6.2 vs. 2.9 kg/d, SED = 1.3, P = 0.08). Dystocia cows with the longest latency to eat a meal after calving ate the most during their first meal (R^2 = 0.72; n = 9, P = 0.004). Compared to healthy cows, a shorter latency was required to increase meal size for dystocia cows, likely as a result of hunger (dystocia*latency, P = 0.002). In the 6 hr before calving, all cows transitioned from standing to lying positions more often than in previous periods (bouts*period, P < 0.001); by 12 hr before calving dystocia cows changed positions more often than healthy cows (5 vs. 3 /6hr, SED = 0.8, P = 0.07). An improved understanding of how dystocia impacts cow behavior will aid in the development of housing practices that accommodate cows at-risk for experiencing difficult calvings.

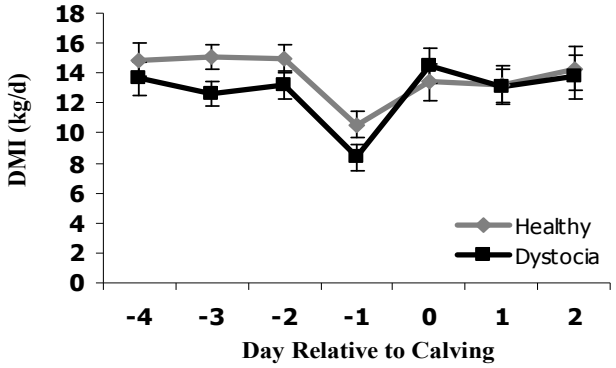

Figure 1: DMI of cows that experienced dystocia and healthy cows from 4 d before to 2 d after calving