

## Uterine Torsion in Cattle: 55 Field Cases

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### Introduction

Uterine torsion can occur in all species, but is especially common in cattle, with occurrences reported in 1 to 12.5% of dystocias. However, most of the published work has been done on hospital referred cases and does not represent cases seen in the field by general practitioners. The purpose of this cross-sectional study was to describe field cases of uterine torsion as well as examine a few risk factors for the condition.

### Materials and Methods

All cases of dystocia attended by clinicians from two university veterinary teaching hospital ambulatory services (Cornell University and the Université de Montréal) over a period of one year were recorded. Clinicians had to fill-in a questionnaire designed for the study. Information was obtained on the calf (presentation, position, posture, presence of a twin, gender, approximate weight and viability) and dam (breed, parity, breeding date). Herd information, such as number of lactating cows, dry cow housing and calving facilities, were noted. For all the calvings, details were recorded on the type of dystocia, presence of lacerations, treatment for hypocalcemia (preventive or clinical) and whether the cow was standing or not at the end of the visit. For uterine torsion cases, the method of diagnosis, degree and direction of the torsion, as well as the method of correction were recorded. Month of calving, parity, dry cow housing, calving facilities, presence of fetopelvic disproportion or twins and viability of the calf (calves) were evaluated as risk factors for uterine torsion by calculating odds ratio (OR) and their confidence intervals (95% CI). Descriptive statistics were also conducted for the parameters recorded on the questionnaires.

### Results

A total of 273 dystocias were noted. Twenty percent (55 cases) were uterine torsions. Eighty percent of the calves (39/49) were in anterior presentation and twenty percent in posterior presentation (10/49). Following correction of the uterine torsion, most calves were

in a normal posture (39/47), whereas a few had a retained head (5), leg (1) or 2 legs (2). The cervix failed to dilate in 34% (18/53) of the cows, and the vagina in 8% (4/53). Lacerations were present in 21% of cows following delivery (vulva-1/48, vagina-4, cervix-4, uterus-1). In 67% of cases, the uterine torsion was diagnosed by vaginal examination alone, whereas in the remaining cases a rectal examination also had to be performed. Vaginal involvement was present in most cases (64%). Sixty percent of the torsions were counterclockwise, and in three-quarters of the cases (35/47) the uterus was rotated 180° or less. Only four cases had a 360° torsion, and these were the most severe cases observed. Almost half of the cases (22/48) were corrected manually. Another 31% were corrected by rolling the cow, nine cases with a plank and six cases without. A detorsion rod was used in five cases (10%). A caesarean section had to be performed in six animals. In five out of those six animals, the surgery was performed after successful detorsion of the uterus, because of incomplete cervical dilation. Out of the fifty uterine torsions for which the information was available, thirty-six calves were alive, including one set of twins and 17 calves were dead (including two sets of twins). Sixty-eight percent of the cows (34/50) received calcium following the procedure and 81% of the animals were standing at the end of the visit.

There was no effect of month of calving, dry cow housing, calving facilities or viability of the calf (calves). Uterine torsion was more common in pluriparous cows (OR=3.93; 95% CI=1.80-8.57) and less common in twin pregnancies (OR=0.07; 95% CI=0.01-0.56). It was also less common when there was fetopelvic disproportion (OR=0.04; 95% CI=0.01-0.31).

### Significance

Uterine torsions were more common in this study than in previously published work. Most cases can be relatively easily corrected in the field, but lack of cervical or vaginal dilation frequently occurs following correction of the torsion and can cause lacerations or require a caesarean section to deliver the calf.