RESULTS & DISCUSSION

The objective of this study is to estimate the risk factors and to evaluate the result of the treatment for the CAR in the Belgian blue cattle breed (BBCB) applying the four grades classification (Table 1) developed in the Clinic for Ruminants of the University of Liège [3].

A. Clinical epidemiology

In this study, 84 % were males and the weight and age on average were respectively 55 ± 2 kg and 10 ± 1 days (Table 2). The weight of affected calves, on average, was 9 % higher than healthy calves of the same age. Grade III is the most frequent in the case load of the Clinic.

When the grade increases from I to IV, the number of females decreases and the weight of calves increases, but not statistically significant. Since the application of our classification by field practitioners, CAR III, without complications, are directly treated in farm and CAR IV are systemically euthanized. That explains the high percentage of CAR III with a poor prognosis referred to the Clinic and the decrease of referred cases compared to Sarteleit with 90 cases reported in 2 years [2].

CONCLUSION

We herein report different predisposing factors of this congenital defect: sex, weight at birth, parity of the dam and in-utero calf’s position.

The four grades classification seems to be the best way to precise the diagnosis and to establish the appropriate treatment. The optimal age for the surgical treatment is 5 to 10 days to avoid stress and to improve passive immune transfer. After 10 days, complications, such as arthritis, periarticularis, osteoarthropathy can occur. Bandages to protect joints, principally in calves with high grades of CAR are recommended. Furthermore, according to the poor success rate for the grade IV, euthanasia is recommended to avoid economical losses due to the treatment and the nursing in farm.

MATERIALS & METHODS

Our study is based on 74 calves affected by CAR referred throughout 3 years (2009 to 2011) to the Clinic for Ruminants. Sex, weight, parity of the dam and general and special examinations were recorded. The grade and the prognosis of the CAR were determined according the classification and the corresponding treatment was performed. The calves were discharged directly after the surgery and a telephone follow up was performed at least six weeks later.

The age of the calves at the time of the hospitalization strictly depends on the severity of the CAR. CAR I and II are usually treated by the veterinarians before referring. CAR III and IV are directly referred to avoid complications. No calf was referred before 5 days of age. Considering the localization, forelimbs were affected in 73.5% of the cases. This result slightly differs from Van Huffel et al. [4] where forelimbs were affected in 73.5% of the cases. CAR severity increases when hindlimbs are involved because of the impossibility to stand up (Figure 3).

The most frequent complications, due to prolonged recumbency and attempts to stand, are arthritis and osteoarthropathy (Figure 4).

The overall success rate of treatment was 71.5 % (Table 4). After treatment, the number of alive calves was significantly higher than the dead calves. Different results were observed in other studies with 80 % [1] and 51.5 % [2] of success.

REFERENCES

5. THÉRON S. Evaluation of the treatment of the congenital articular rigidity in calves depending on the grade of severity.