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Incidence risk of milk fever treatments – Effect of giving the farmer access to treatment

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BACKGROUND

In September 2010, the Danish legislation gave the farmer access to treat own cows for milk fever using intravenous injection of calcium products. It has been a requirement that the herd owner took a course and obtained authorisation from the Danish Veterinary and Food Administration. It is hypothesised that the legislation have had an effect on the treatment threshold for milk fever treatment and mortality risk following treatment.

OBJECTIVES

The objectives of this study are to evaluate if the access to treat own cows for milk fever has been followed by:

1) a change in treatment incidence risk of milk fever
2) a change in the number of re-treatments for milk fever
3) a change in mortality risk following treatment for milk fever

MATERIALS AND METHODS

In all herds authorised to perform own treatments, a Study Period I consisting of events within one year before access to own treatment and a Study Period II consisting of events within one year after access to own treatment were defined. Only herds that had observations for a full year period in both Study Period I and Study Period II were included. Hereafter, 691 herds were included in the analysis.

Incidence risk of milk fever cases was calculated as the number of cows with any milk fever treatment within 14 days before or after calving divided by the number of calvings. Number of treatments per case was calculated as the number of treatments divided by the number of calvings where the cow was treated for milk fever. The case fatality risk was calculated as the number of cows that were euthanized or died unassisted within 30 days after calving among the treated cases.

RESULTS

The calculations of incidence risk of milk fever cases, the number of treatments per case and case fatality risk are presented in Table 1. For comparison, the total mortality the first 30 days after calving was 2.1 % in Study Period I and 1.8 % in Study Period II.

Table 1. Calculation of incidence risk of milk fever cases, number of treatments per case and case fatality risk after milk fever treatment. A study period I before the farmer had access to own treatment is compared to a Study Period II after the farmer had access to own treatment

	No of calvings (a)	No of milk fever cases (b)	No of milk fever treatments (c)	No of deaths following treatment (d)	Incidence risk (b*100/a)	No of treatments per case (c/b)	Case fatality risk (d*100/b)
Study Period I	167,301	5342	6781	631	3.19 %	1.27	11.81 %
Study Period II	177,136	11,313	13,198	881	6.39 %	1.17	7.79 %

DISCUSSION AND CONCLUSION

The incidence risk of milk fever treatment is twice as high in Study Period II compared to Study Period I. The most obvious explanation is that there in Study Period II was a much lower threshold of clinical signs of when to treat a cow for milk fever. It is therefore anticipated that many cases in Study Period II have been much milder. This can also explain that the number of treatments per case is lower and also that the case fatality risk is lower in Study Period II compared to Study Period I.