Clinical and metabolic effects of Catosal® in cows with abomasal displacement

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Objective:

Abomasal displacement is accompanied by symptoms of indigestion, including disturbances of the abomasal emptying rate, and metabolic disorders.

The aim of this study was to investigate the clinical and metabolic effects of Catosal® (synonym Coforta®) in cows with left abomasal displacement.

Experimental design:

Upon inclusion, the animals were allocated alternately to the test groups. Animals with severe systemic disorders were not included in the study. Fifteen cows received 25 ml of Catosal® as an intravenous bolus about 2 hours before the start of surgery. The other 15 cows served as an untreated control group. Both groups received the same co-medication consisting of an i.v. 5 % glucose-containing saline solution (20 l / 24 h), twice-daily antibiotic treatment, flunixin meglumine, and propylene glycol. The abomasal emptying rate was measured using a xylose absorption test (50 % D-xylose, 500 mg/kg BW). Two hours after premedication, the abomasum was repositioned surgically.

The following parameters were assessed at the start of study and at predefined intervals for up to 72 hours post surgery: feed intake, rumination, rumen movements, rectal body temperature, pulse and respiration rates, D-xylose blood levels, blood pH, base excess, hydrogen carbonate levels in blood and pCO2, haematocrit, haemoglobin, haemogram, serum electrolytes, ASAT, GLDH, CK, protein, glucose, cholesterol, urea, bilirubin, ß-hydroxy-butyrate, free fatty acids, haptoglobin, antioxidative status and serum cortisol levels.

Results:

Feed intake, rumen movements and rumination returned to physiological values significantly earlier in the Catosal® group ($p<0.05$). The clinical findings were supported by beneficial effects on ß-hydroxybutyrate, free fatty acids, ASAT and creatine kinase levels in the blood (all $p<0.05$). The abomasal emptying rate was faster in cows given Catosal® than in the control group.

There was also a tendency towards Catosal®-related improvements in other parameters (glucose, bilirubin, GLDH), pulse and respiration rate, although these differences could not be confirmed statistically. The anti-oxidative status, serum cortisol levels and haematological parameters were not affected by treatment.

Conclusion:

Catosal® mediates stabilisation of clinical and relevant metabolic parameters during con valescence from abomasal displacement.