

genesis: intestinal torsion (mesenteric torsion and intestinal volvulus; $n = 23$), torsion of a large viscus (abomasal torsion or cecal volvulus; $n = 13$), gastrointestinal distention (ruminal bloat, abomasal bloat, displaced abomasum, gaseous intestinal distention, cecal dilatation; $n = 13$), disturbance of intestinal passage (intussusception, ileal obstruction, bridle stricture; $n = 26$), and malformation (atresia coli, atresia ani; $n = 8$). Ten calves did not fit any of those categories (necrosis of the esophageal groove, perforated abomasal ulcer, abomasal rupture, abomasal incarceration, perforated duodenal ulcer). A subset of calves in which peritonitis had developed ($n = 23$) was additionally evaluated as a group, irrespective of the underlying disorder.

The diagnostic validity of the parameters listed on the introduction was quantified by dividing the respective predictive values by the group prevalences. Quotients > 1.5 and $< .5$ (*i.e.* increases, or decreases, of probability by 50 %) were considered relevant.

Results and Conclusions

Seven animals had false colic (convulsions due to hypoglycemia, itching due to heavy ectoparasitic infestation, tetanus), and 10 had colic due to extra-gastrointestinal conditions (umbilical diseases, urethral obstruction). In the remaining 93 calves, colic was due to gastrointestinal disorders.

Several conditions can be detected, or ruled out, by relatively simple clinical diagnostic procedures. In cases of gastrointestinal colic, the most relevant question from a practical point is the indication for surgical intervention. There are conditions in which conservative treatment may be sufficient (e.g. gaseous intestinal distension and ileal obstruction), and there are those in which surgical intervention will probably be unsuccessful (cases that have developed peritonitis).

Relevant quotients and a differential diagnostic flowchart will be presented.

Comparison of an Ovsynch Protocol with a $\text{PGF}_{2\alpha}$ - Treatment Based on Rectal Palpation

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Introduction

Systematic breeding programs are used to induce estrus, or may even allow timed artificial insemination (AI) in dairy cows. We conducted a trial in a commercial dairy herd to compare an Ovsynch protocol to a protocol using Prostaglandin $\text{F}_{2\alpha}$ ($\text{PGF}_{2\alpha}$) in cows with a corpus luteum (C.L.) diagnosed by rectal palpation. Further objectives of the study were to analyze the timing of ovulation in the Ovsynch group by ultrasound, and effect of the stage of estrus cycle at the start of an Ovsynch protocol on the conception rate using timed AI.

Material and Methods

Cows in the $\text{PGF}_{2\alpha}$ protocol ($n=349$) were administered $\text{PGF}_{2\alpha}$ after a C.L. had been diagnosed by rectal palpation. Cows were inseminated on observed estrus. Cows not inseminated within 14 days after treatment were re-examined and treated with $\text{PGF}_{2\alpha}$ if a C.L. was diagnosed.

Cows in the Ovsynch protocol ($n=363$) were treated with gonadotropin-releasing hormone (GnRH) (Day 0), $\text{PGF}_{2\alpha}$ (Day 7) and GnRH (Day 9) and bred on appointment 16 – 20 hrs later. Ovaries were scanned via ultra-

sonography four times in each cow: at the time of the second GnRH injection, at the time of AI, and at 26 hrs and 40 hrs after the second GnRH injection. Milk samples were collected four times: 7 days prior to first GnRH injection; at the first GnRH and PGF_{2α} injections; and prior to AI. The first two milk samples were collected to determine stage of estrus cycle at the start of the Ovsynch protocol. The third milk sample was collected to determine the presence of a C.L. at the time of PGF_{2α} injection. The fourth sample was collected to determine complete regression of the C.L.

Results and Conclusions

In the Ovsynch group, 89.6% of all synchronized animals ovulated during a 40-hour period following the

second injection of GnRH. The percentage of follicles ovulating between 0 to 17 hours, 17 to 26 hours and 26 to 40 hours was 9.7, 21.5 and 58.3%, respectively. Conception rate for the first AI did not differ between different stages of cycle (25.0, 37.0, 33.3, 36.1% respectively). A corpus luteum was demonstrated in 60.7% of cows in the Ovsynch group at the time of PGF_{2α} treatment.

Conception rate on first AI was similar for the Ovsynch and the PGF_{2α} group (37.9% vs. 41.7%). Service rate was higher (91.8% vs. 69.8%) and mean days to first AI were lower (77.2 ± 11.4 vs. 86.2 ± 18.7) in the Ovsynch group than in the Prostaglandin F_{2α} group. Average days open did not differ between the groups (99.3 ± 33.0 vs. 104.6 ± 32.4). Thus, both protocols may allow effective management of AI in dairy cows.

A Multi-location Clinical Study of Ceftiofur for the Treatment of Postpartum Cows with Elevated Temperature and other Complications

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Introduction

Dairy cows face the biggest challenges at freshening. The so-called "postpartum disease complex" consists of ketosis, displaced abomasum, hypocalcemia, mastitis, milk fever and postpartum or puerperal metritis. These occur around calving. Selecting an appropriate treatment is challenging and debatable. The objective of this study was to evaluate the effect of ceftiofur in postpartum cows with elevated temperatures and other complications on their health and milk production under field conditions worldwide.

Materials and Methods

Fresh cows were enrolled from 12 locations worldwide when rectal temperatures were $\geq 39.5^\circ\text{C}$ or 103.1°F for the first 10 days postpartum. The cows were randomly assigned to receive 1 mg ceftiofur equivalent (CE)/kg (0.45 mg/lb) body weight at enrollment and every 24 hours until three treatments were administered, or to receive no treatment. The primary variable was cure, as measured by temperature $< 103.1^\circ\text{F}$ (39.5°C), no other antibiotic therapies used, and absence of clinical signs of illness when evaluated on Day 9 or 10 after