

service CR were 69% (38/55), 41% (11/27), 27% (6/22), and 27% (3/11) for cows with no endometritis, or for cows with mild, moderate, or severe endometritis, respectively. Cows with mild, moderate, or severe endometritis were 4.2 ($p < 0.01$), 7.7 ($p < 0.01$), and 5.3 ($p < 0.01$) times less likely to be pregnant following first service,

respectively, compared to cows with no endometritis. These data suggest that endometritis at the beginning of the breeding period has a high incidence rate, is associated with decreased first service CR, and that CR decreases as the severity of endometritis increases.

Results of a Seven-Year Surveillance of Milk Safety Related to Use of Ceftiofur Sodium and Ceftiofur Hydrochloride

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Introduction

In 1991 and 1998, respectively, Pharmacia Animal Health (PAH) received FDA approval to use Naxcel® Sterile Powder (ceftiofur sodium) and Excenel® Sterile Suspension (ceftiofur hydrochloride) in lactating dairy cattle. Currently, these cephalosporin (penicillin-family) products are the only two that can be used with no milk-discard period. Since 1991, PAH has received about 50 complaints each year where milk adulteration incidents allegedly resulted following proper (labeled) use of these products. To resolve these complaints, we developed a system to determine what actually caused these adulterations.

Materials and Methods

High-pressure liquid chromatography (HPLC) conclusively identified the violative antibiotic(s) in most (80%) of these reported adulterations.

Results and Conclusions

See Tables 1 and 2, below. When used by their labeled routes of administration, Naxcel and Excenel have not caused a single adulteration incident. When used in an extra-label manner (i.e., by intra-mammary infusion), Naxcel and Excenel have caused adulterations. When improper use of Naxcel/Excenel has not caused the adulterations reported to us, the cause has invariably been determined to be either penicillin g or cephalosporin, with amoxicillin, ampicillin, and cloxacillin only rarely identified.

Table 1. Cases of adulteration by year.

| Adulterations due to: | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|------|------|------|------|------|------|------|
| Ceftiofur metabolite residues | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parent ceftiofur residues [extra-label/intramammary use] | 8 | 33 | 17 | 12 | 18 | 18 | 3 |
| Other beta-lactams | 23 | 22 | 13 | 20 | 18 | 26 | 19 |
| Inhibitor detected, no positive ID | 2 | 2 | 3 | 2 | 3 | 1 | 0 |
| Negative [no inhibitor found] | 3 | 5 | 8 | 6 | 9 | 4 | 5 |
| Total No. Cases | 36 | 62 | 41 | 40 | 48 | 49 | 27 |

Table 2. HPLC results of inhibitory substances found.

| Inhibitors Positively Identified | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|------|------|------|------|------|------|------|
| Parent ceftiofur [extra-label/ intramammary use] | 8 | 33 | 17 | 12 | 18 | 18 | 3 |
| Penicillin, amoxicillin or ampicillin | 12 | 4 | 10 | 11 | 11 | 17 | 14 |
| Cephaparin | 8 | 4 | 3 | 7 | 8 | 15 | 6 |
| Cefazolin | 1 | 0 | 0 | 0 | 2 | 4 | 1 |
| Inhibitor detected, no positive ID | 6 | 16 | 3 | 5 | 3 | 1 | 0 |
| Negative [no inhibitor found] | 1 | 5 | 8 | 5 | 9 | 4 | 5 |
| Total No. of Inhibitors Detected | 36 | 62 | 41 | 40 | 51 | 59 | 29 |

Association of Lameness in Dairy Cattle with Other Diseases

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Introduction

Lameness has been recognized as a frequently occurring disease syndrome in dairy cattle. The dimensions of the problem are immense. Consider that, according to Greenough and Vermunt,⁴ a herd should be considered a "problem herd" when the yearly incidence has surpassed 10%—while multiple studies show yearly incidences between 14% and 25% not to be uncommon.^{1,2,3,5} Not only is lameness a major animal welfare concern; its likely impact on productivity and development of concurrent diseases makes it an important economic factor. The results presented here propose to illuminate the correlation between lameness and other diseases in two large herds in New York state.

Materials and Methods

Study herds were two large commercial dairy herds in the Ithaca area which had daily milk weight measuring systems installed. Both herds used DairyComp 305[®] to keep their records, which were excellent in both herds. Lamé cows were identified by the herdsmen, and examined and treated by well trained personnel. In Herd A this was the hoof trimmer, and in Herd B treatments

were performed by one of the farm employees. Results of the examinations and treatments were entered into DairyComp 305[®]. This study examines the relationship between lameness diagnosed in different stages of lactation and its impact on the occurrence of ketosis, left displaced abomasum and mastitis.

Results and Conclusions

At the time of manuscript submission, these data were not analyzed. Results will be presented during my presentation at the Conference.

References

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