Benchmarking Early Postpartum Disorders in Alberta Dairy Herds

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BACKGROUND & OBJECTIVES

• High producing dairy cattle are susceptible to an increased incidence of early postpartum disorders.

The main objective was to determine the lactational incidence of postpartum disorders (PD) [i.e. retained fetal membranes (RFM), metritis, milk fever (MF), ketosis, displaced abomasum (DA), fatty liver (FL), and mastitis (MAS)] during 60 days in milk (DIM), and death and culling rate up to 90 DIM in dairy cows.

A secondary objective was to investigate risk factors associated to PD and the association between PD and average milk yield by 90 DIM.

MATERIALS & METHODS

• 1096 (328 primiparous) lactating dairy cows from 11 free-stall dairy herds located in Central and Northern Alberta, Canada.

• Blood samples were collected between 2 and 14 DIM.

• Plasma concentrations of minerals (Ca, P, Mg, K, and Na), liver enzymes (ɣglutamyl transpeptidas, aspartate aminotransferase, glutamate dehydrogenase), β-hydroxybutyrate, non-esterified fatty acids, haptoglobin, and cholesterol were measured with an automated analyzer (Hitachi 911 Analyzer, Laval, QC).

• Metabolic profiles and farm records (PD were defined as in the Canadian National Health Project) were used to determine the incidence of each PD.

• Milk yield data were retrieved from Dairy Comp 305.

RESULTS

• The overall incidence of PD, death and culling rate was 56, 4 and 5%, respectively.

• Incidence of PD was greater in cows calving twins (88 vs. 55%), with multiparous cows more likely to have ketosis (19 vs. 14%), MF (10 vs. 4%), and MAS (28 vs. 22%), and less likely to have metritis (14 vs. 18%) than primiparous cows.

• Cows with MF or DA were 59 and 50 times more likely to die and those with ketosis 16 times more likely to be culled compared to healthy cows.

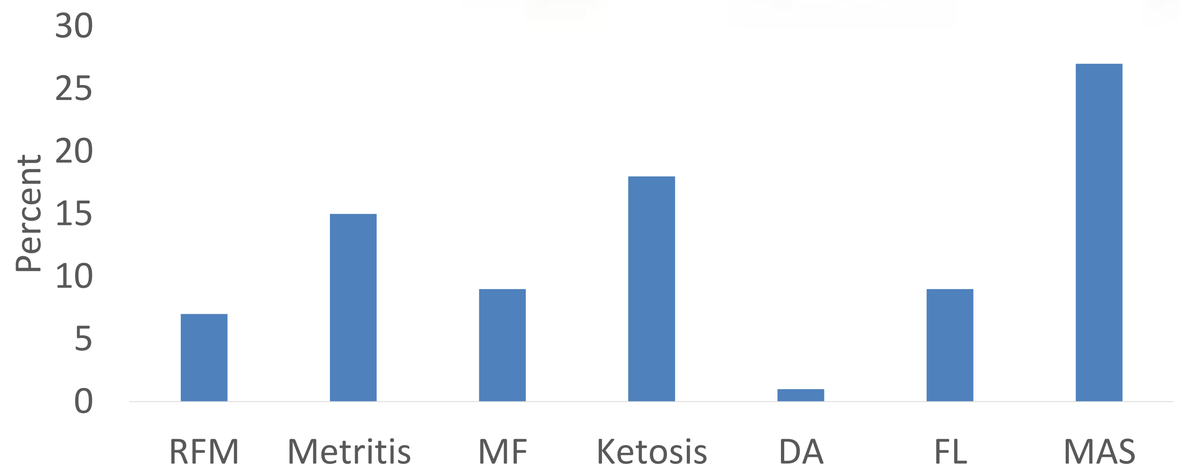

Fig 1. Incidence of retained fetal membranes (RFM), metritis, milk fever (MF), ketosis, displaced abomasum (DA), fatty liver (FL), and mastitis (MAS) during 60 days in milk (DIM) in 1096 cows from 11 dairy farms.

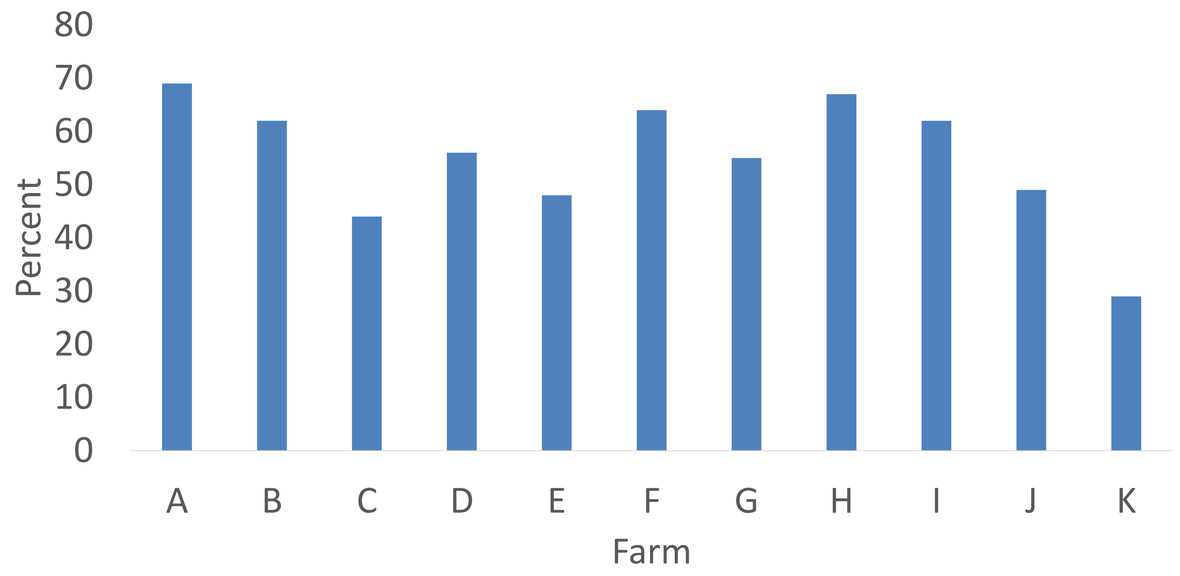

Fig 2. Overall incidence of early postpartum disorders by farm.

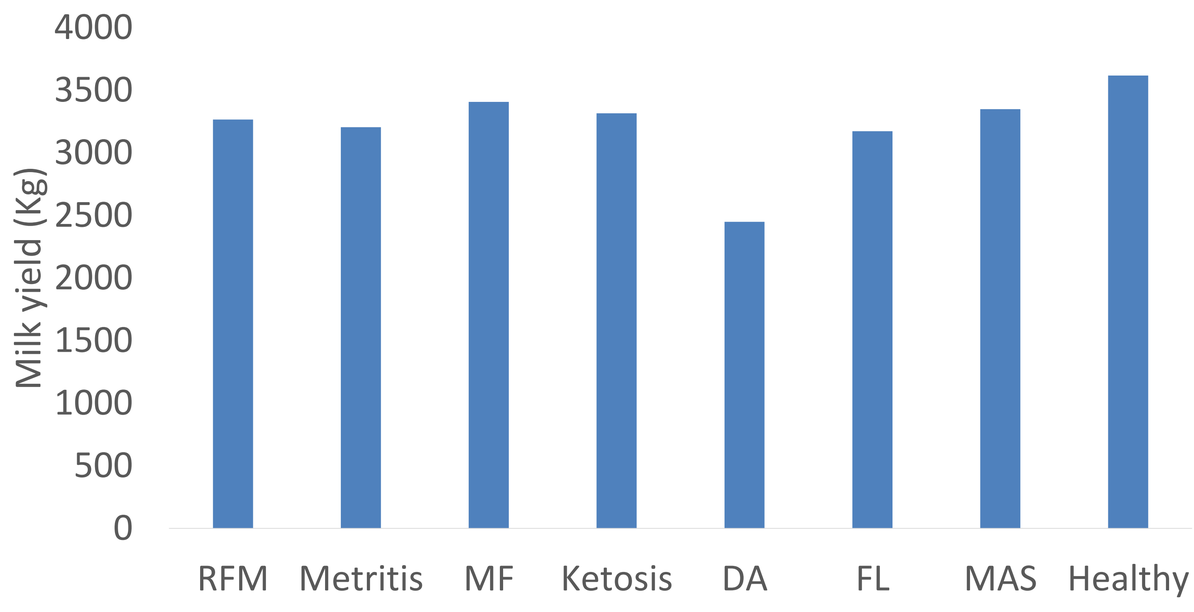

Fig 3. Average milk yield by 90 DIM among healthy cows and those with retained fetal membranes (RFM), metritis, milk fever (MF), ketosis, displaced abomasum (DA), fatty liver (FL), and mastitis (MAS).

TAKE HOME MESSAGE

• The overall incidence of postpartum disorders was 56%, but variable among farms.

• The most common postpartum disorder was mastitis followed by ketosis.

• The cost of postpartum disorders, only based on loss of milk yield by 90 DIM, can range from 169 to 935 CAD.

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