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R-AH-4: Udder Scald May Be More Costly Than You Think

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Published in Dairy Star, December 2008

Udder scald is a moist often foul smelling dermatitis between the udder and upper thigh or between the udder halves of cows. Very little is known about the exact cause. Dermatitis found between the udder and the upper thigh is often present in early lactation, thought to be a sequel to skin damage caused by the extra pressure against the upper thigh due to udder edema, is most frequently found in first lactation cows. Cornell University veterinarians reported in a 1600-cow herd case that dermatitis between udder halves may be associated with sarcoptic mange but were not able to prove this with certainty. They also found lesions to be more prevalent in later lactation older cows. This may suggest that the condition we commonly called udder scald is really two different conditions. Regardless of the exact cause, the resulting skin lesion is painful for the cow and a nuisance for milkers. A recent University of Minnesota and Illinois collaborative study has shown that this condition in early lactation causes high milk losses. Milk production losses averaged 681 pounds for each cow having this condition, which is equal in comparison to digestive disorders (indigestion or diarrhea) for which milk production losses were 682 pounds. In this study, 82% of the udder scald cases were in first calf heifers and the average days in milk at diagnosis was 10 days. Only five cases were recorded past 42 days in milk and only one was a first lactation cow.

A novel statistical process control approach was used to analyze daily production records enabling a comparison of cows with no health events post-calving to those with postpartum health problems. Since milk production is a very sensitive indicator of emerging health problems, the analysis method not only detected the losses in milk production, it also predicted the onset of the emerging clinical problem and, in some cases, 8 to 10 days before the actual clinical diagnosis. We are hopeful that these procedures can be extended to commercial dairy farm use in the near future.

Table 1. Milk production of losses (lb) for common post-calving diseases, when losses began to occur before clinical diagnosis was made and the duration of losses after clinical diagnosis.

Disease	Days milk losses detected before diagnosis	Duration of milk losses after diagnosis	Total milk losses (lb)
Digestive disorders (indigestion or diarrhea)	5	>49	682
Udder scald	9	>49	681
LDA	5	>49	517
Retained placenta	2	>49	432
Milk fever	1	14	348
Udder edema	1	35	316
Ketosis	10	28	269
Metritis	10	28	250

The cardinal rule of every successful herd health program is to achieve early problem identification. Preventive transition cow management and fresh cow programs are very important. Because of its relatively hidden location, udder scald is generally not noticed and is found only after the lesion is smelly and a severe skin erosion has developed. What can we do to lessen or prevent udder scald?

- **Control of udder edema** will help especially for first calf heifers. Contributing factors are overfeeding grain, excess salt in dry cow rations, and high potassium forages. Limiting salt to dry cows is desirable; however, cows do need some salt during the dry period. Generally, high potassium feeds need to be limited if edema is a significant problem. Diuretics (i.e. Lasix) and corticosteroids (i.e. dexamethasone or prednisone) can be used as treatments on the more serious cases, but use these drugs prudently and according to directions for milk and meat withholding. Since dexamethasone depresses immune function, care must also be taken not to treat cows with concurrent infections like mastitis. Udder massage (10 to 20 minutes, 2 times per day) and moderate exercise have been helpful also.
- **Hygiene** is important from the standpoint of mastitis and postpartum uterine disease but is also important in reducing development of serious skin lesions. When cultured, the udder scald lesions usually contain many of the same bacteria commonly found in the environment like those causing environmental mastitis or foot rot. Therefore, keeping close-up, maternity and fresh cow pens clean and dry is important.
- **Prompt treatment of the skin lesion** will greatly reduce the impact of this problem. This means that a thorough exam of the udder including between the upper thigh and udder at or even before calving is recommended. Using a mirror and a small flashlight may be helpful. The treatments for udder scald are numerous and none are too effective probably because they have been initiated after the lesion is already quite severe. Checking with your veterinarian for treatment specifics is advised. Various combinations of topical disinfectants, astringents or topical antibiotics can be effective when these infections are diagnosed early.

