Vet Call

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Navel, joint ill: Prevention is best alternative

Navel or joint ill is caused when bacteria enter a calf's bloodstream and locate in the navel or joints or both, causing an infection or abscess. The bacteria that cause navel or joint ill are common on a calf's skin and in its environment. The primary reason calves develop navel or joint ill is failure to absorb sufficient colostral protection from their dam.

For a calf to consume adequate amounts of colostrum, it must be able to stand, walk, find the dam's teats, suckle within six hours of birth and suckle several more times in the next 12 hours. In addition, the dam must stand, have a good maternal bond with the calf and have teats that can be grasped by the calf.

Delayed suckling appears to be the most common cause of failure of passive transfer of antibodies. Compared to calves that require assistance during birth, calves born unassisted have a substantially shorter interval from birth to standing, decreased risk of poor bonding with their dams and greater antibody passage. Furthermore, calves requiring minimal assistance during delivery are at a substantial advantage in many other ways to calves requiring more assistance.

In general, heifers and cows in good body condition at calving are more likely to have calves with adequate passive transfer than are thin heifers or cows. If a dam's diet is deficient in protein before calving, the calf will have decreased absorption of antibodies.

▪Other risk factors

Despite the importance of adequate antibody passage, colostral intake is not the only factor that determines whether calves develop navel or joint ill. It is estimated that 10%-40% of calves may fail to receive adequate amounts of antibodies from their dams; however, not all of these calves become sick.

The other important factor that determines the number of sick calves and the severity of disease is the amount of exposure to disease-causing germs. Sanitation, protection from inclement weather and separation from sick calves will decrease the risk of illness and death.

To ensure calves are born in a sanitary environment, gestating cows should be moved to a clean calving pasture just before the start of calving season. The calving area should be free of mud and protected from the wind. A large pasture with good drainage and a natural windbreak may be all that is necessary for many mature herds. Inexpensive windbreaks can be constructed when natural protection is lacking.

Another factor that adds to disease risk during inclement weather is that cattle will often congregate into a small area because of excessive snow or surface water or because feed and bedding are repeatedly placed in the same location.

Also, producers may intentionally move cattle into a small area to shelter them from inclement weather. These small areas rapidly become crowded and muddy, which leads to an increased possibility of pathogen transfer among cattle.

▪Gaining a foothold

The bacteria that cause navel or joint ill can enter the calf's body through the mouth, digestive tract, eye, lung or other mucous membranes. Calf diarrhea causes damage to the mucosal lining of the intestinal tract, which makes the calf susceptible to septicemia (bacteria in the bloodstream). Scouring calves should be treated with antibiotics given systemically (intramuscularly or subcutaneously) to decrease the risk of navel or joint ill after they recover from diarrhea.

Signs of navel or joint ill can occur as early as 2 days of age. The calf may appear depressed and may exhibit lameness, swollen joints, cloudy eyes, a poor appetite, diarrhea or a fever. Early in the disease, the navel may not be enlarged.

Other diseases and problems can have the same signs as navel or joint ill, so often a veterinarian must examine the calf to make a diagnosis.

▪Prevention and treatment

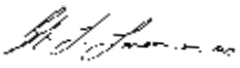
Prevention of navel or joint ill involves improving colostrum consumption, calf vigor and sanitation. Proper heifer development and nutrition, breeding heifers to bulls with low expected progeny differences (EPDs) for birth weight, appropriate cow nutrition, and having a clean calving environment are good strategies to prevent navel or joint ill.

Treating infected calves that also have signs of nervous system (brain or spinal cord) disease is not likely to be successful, and euthanasia of the calf should be considered. Calves with more than one chronically infected joint and an infected navel also have a slight chance for recovery.

If treatment is attempted, it must be aggressive. Use of approved broad-spectrum antibiotics given intravenously (IV) for three days followed by 10-14 days of non-IV antibiotics usually is recommended. Oral or IV fluids, usually with glucose added, are given to treat and prevent dehydration. Other care may include heat lamps, adequate nutrition, and clean, dry stalls or bedding areas.

Infected joints should be flushed by sedating the calf; clipping and thoroughly cleaning the skin over the joint; and using two large (14-gauge) needles, placed on opposite sides of the joint, to force sterile solution through it — one direction, then the other. Joint flushing usually is repeated at 24- to 48-hour intervals for three treatments.

When treatment is aggressive, the cost can be high. However, if the calf is severely affected, less-than-aggressive treatment is not likely to be successful. Obviously, prevention by decreasing calving difficulty and improving sanitation is preferable to death, production loss or high treatment cost.



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