

Veterinary Link: Navel and joint ill

by **BOB LARSON,**
*professor of production
medicine, Kansas State
University*



As we prepare for spring calving, an important health concern in young calves is navel ill, which can lead to joint ill. Navel ill occurs shortly after birth when bacteria from the environment or skin are able to enter the calf through the navel and cause an infection or abscess in the

umbilical (navel) area. If the infection gets into the bloodstream and spreads throughout the body, joints in the legs are likely to become infected and the problem becomes joint ill.

Prevention

The bacteria that cause navel or joint ill are very common, but are only likely to cause problems if the calf is born in a dirty environment or does not get enough colostrum. Prevention of this problem focuses on avoiding calving in drylots (or mud lots) so that exposure is minimized, and by minimizing the risk of calving difficulty (particularly in heifers).

In order for a calf to consume adequate amounts of colostrum, it must be able to stand, walk, find the dam's teats and suckle within six hours of birth, and then suckle several 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.

Calves born unassisted (i.e., without need of human intervention) stand more quickly, are more likely to bond with their dam and have greater consumption of colostrum, compared to calves that required assistance during birth. Furthermore, calves requiring minimal assistance are at a substantial advantage compared to calves requiring more assistance during delivery. Proper heifer development and nutrition, use of high calving-ease-EPD bulls on heifers and appropriate cow nutrition are good strategies to decrease the risk of calving difficulty.

Despite the importance of adequate antibody passage, colostrum intake is not the only factor that determines whether calves develop navel or joint ill. It is estimated that 10%-40% of beef calves may fail to receive adequate amounts of antibodies from their dams; however, not all 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. The ideal location for calving is on well-drained pastures. If heifers or cows need to be moved to a drylot location in order to deal with calving difficulty, extra attention should be given to improve sanitation and to treat the navel of newborn calves with iodine.

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

An additional factor that adds to the risk of infectious disease in young calves during severe weather is that cattle will often gather into a small area because of excessive snow or surface water, or because of the practice of repeatedly

placing feed and bedding in the same location. Producers may also intentionally move cattle into a small area in an attempt to provide them shelter from severe weather. These small areas rapidly become crowded and muddy, which leads to an increased possibility of navel or joint ill in the calves.

Dipping the navel of newborn calves in iodine can be helpful if the calf is born in a drylot or other unsanitary area, or if the calving was assisted. If calves are born on well-drained pastures and are experiencing very little calving difficulty, dipping navels is less important.

Signs and treatment

Signs of navel or joint ill can occur as early as two days of age. If only the navel is involved, it will usually appear enlarged and wet. If the infection has moved into the bloodstream, the calf may appear depressed, have lameness or swollen joints, have cloudy eyes, have a poor appetite or diarrhea, or have a fever. Early in the disease, the navel may not be enlarged.

Other diseases and problems can have the same signs as navel ill, so often a veterinarian must examine the calf or calves involved to make a diagnosis. Treatment of calves with joint ill that also have signs of nervous-system (brain or spinal cord) disease is not likely to be successful, and euthanasia should be considered. Calves with more than one chronically infected joint as well as an infected navel also have a slight chance for recovery.

If the infection is limited to the navel area and has not invaded any joints, treatment with antibiotics for several days and possibly surgical removal of the infected navel area have a good chance of being successful. If joints are involved and treatment is attempted, it must be aggressive by using approved broad-spectrum antibiotics for several days (typically 10-14 days or more). Oral or IV fluids 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 then using two large (14-gauge) needles placed on opposite sides of the joint to force sterile solution through the joint, first one direction and then the other. Joint flushing is usually repeated at 24- to 48-hour intervals for three treatments.

When treatment is aggressive, the cost can be quite 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 for affected calves.

