

CALVING EASE

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Sam Leadley (Attica Veterinary Associates) and Pam Sojda (Offhaus Farms)

Navels and Newborns

Preventing problems with navels among newborn calves makes a lot of sense. Treating infections is time consuming and drugs cost money. In a university study of navel dipping, calves with non-dipped navels had an eighteen percent death rate (calves with dipped navels has seven percent mortality). Calves with untreated navel infections gained an average of five and one-half pounds less by three months of age than calves without infections (within-herd comparisons done by Cornell College of Vet. Med.). So, what's "normal" and "abnormal" and what can we do to prevent problems?

What is normal at birth and for very young calves?

The calf's umbilical cord is a lifeline prior to birth. It goes through the navel. Blood goes both to and from the fetus to the placenta. Urine travels from the bladder to the placenta for elimination.

Normally at birth, when the umbilical cord ruptures, the internal parts of the umbilical cord retract into the abdomen. Those parts are the two umbilical arteries, the umbilical vein and the tube leading from the bladder (urachus). Inside the abdomen they are better protected from the environment. In only a few days these arteries, vein and urachus will all shrink. In a normal calf the blood vessels are just a thread by a couple of weeks. The urachus shrinks to a very small ligament.

The hole through which these pass in the stomach wall is the navel. It will gradually close during the first two months of life. The ruptured umbilical cord, what we normally see outside the calf's body, extends at birth through the navel. It should be essentially an empty tube. Two to six inches of umbilical cord are often left hanging from the calf's belly. It will shrivel and dry up during the seven to ten days of life as long as it is neither infected nor repeatedly sucked on by another calf. At that point the navel opening is no longer needed and it continues to close.

What is abnormal at birth and for very young calves?

It's possible to have either partial or complete failure of retraction. That is, one or two arteries, vein or tube fails to retract fully into the abdomen at birth. That does not mean that they won't begin to shrink in size normally inside the body cavity. It does mean that their exposure to physical damage and infection is much higher than normal. Infections frequently create fluids that may delay this shrinking process.

It's also possible to have either an excessively long or short external umbilical cord. Extra long ones are pretty easy to cut off. Less desirable are cases where the cord breaks off even with the

calf's belly at the navel. With no external cord at all, the calf has a higher than normal exposure to pathogens.

In a few cases the tube from the bladder (urachus) may not close off entirely. Thus, urine will drip for several days from the umbilical cord keeping it damp and open to infection.

The opening in the abdominal wall, navel, may not close completely. We call this opening a navel hernia. The tendency for closure failure may be partially traced to the calf's parents. In addition, infections of the navel area are often associated with failure to properly close the opening.

Prevent infections

Clean calving areas help lower pathogen exposure through the navel and umbilical cord.

Prompt treatment of the navel area and umbilical cord with 7 percent tincture of iodine solution (often called navel dip) is an important step in prevention of infections. When used properly, the solution is applied liberally to both the umbilical cord (part that hangs down) and the navel area (opening in stomach wall where the cord comes out of the body). Navel dip solution is an alcohol solution and smells that way. It contains a lot of iodine and stains everything brown. In an emergency, rubbing alcohol may be used until regular navel dip can be purchased. Never substitute teat dip for navel dip. Teat dip contains a very low concentration of iodine. And, rather than drying up the umbilical cord, teat dip contains substances that prevent the desired drying.

This dipping process prevents infections three ways. First, it washes away dirt and pathogens. Second, the strong iodine alcohol solution kills germs on contact. Third, the alcohol base of the dip helps dry up the umbilical cord preventing pathogens from going up the cord into the calf's body.

Diagnose and treat infection promptly

During a study involving 18 farms, college staff examined 410 heifer calves weekly. They felt of each navel area once a week for eight weeks in a row. They were looking for painful navels and/or thickening of the abdominal wall. Thus, they found that 57 calves had navel infections (fourteen percent). In the study it was the owners' responsibility to diagnose and treat sick calves. Of these 57 calves with navel infections, owners diagnosed and treated only 7. That's correct. **Eighty-eight percent of the navel infections were neither diagnosed nor treated by the owners!**

Our challenge, therefore, is to feel of these calves' navels before abscesses form. Diagnose infections consistently and early. Treat using the full dose and duration of the veterinarian recommended drug.

If you know of someone that doesn't currently receive **Calving Ease** but would like to, tell them to **WRITE** to **Calving Ease**, 11047 River Road, Pavilion, NY 14525 or to **CALL** either 585-591-2660 (Attica Vet Assoc. office) or 585-343-8128 (Offhaus Farms Office) or **FAX** (585-591-2898) or **e-mail** sleadley@frontiernet.net or pams91@2ki.net. A limited number of back issues may be accessed on the Internet at www.calfnotes.com and clicking on the link, Calving Ease.

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Reference: A.M. Virtala, G. D. Mechor, Y.T. Grohn and H.N. Erb, "The effect of calthood diseases on growth of female dairy calves during the first 3 months of life in New York State." Journal of Dairy Science 79:1040-1049.