Cow Tales

Uterine complications of pregnancy.

For a cow-calf veterinarian, calving season is someone else’s mental puzzle or worst case scenario. We become pretty skilled at manipulating malpositioned calves and surgical delivery. Ranchers wait on pins and needles during the examination waiting for the doc’s comment and what to do next. The last thing they want to hear is “COOL, I never thought I would see one of these!” or “that’s Weird!” However, biology is a constant source of variation that keeps everyone wondering. The diversity is never quite as prominent as it is during calving season.

Every year we encounter a few uterine aberrations. The most common uterine deviation is a twist or uterine torsion. The torsion is the result of one horn or branch of the bifurcated uterus flopping over the over. In cows, the right horn usually crosses over the left horn because, more times than not, the calf is located in the right horn. The torsion generally occurs during advanced pregnancy in the last trimester. Complications are varied depending on the degree of the rotation. Torsions range from 45 to 360° with 180 to 270° being the most common. The cow will generally show signs of abdominal discomfort. She may go off feed and even have an increased heart rate and/or respiratory rate resulting from the painful stimulus. The more extreme torsions can impede blood flow to the developing calf and even lead to rupture of the uterine vessels. In our experience ranchers notice a cow that seems uncomfortable or seems to be calving without any progression. Treatment in our facility is usually by cesarean section although some torsions can be corrected manually.

Much less common are the hydrops conditions. Hydrops amnii is very rare and usually related to a fetal kidney anomaly. Because it is not associated with a uterine aberration it is only briefly mentioned here. With hydrops amnii the amniotic sac accumulates fluid. Many ranchers have had to break the water bag or found a dead calf born with the water bag over its face. That water bag is also called the amniotic sac. The developing calf rests within the amniotic sac or water bag which in turn is suspended within the allantoic fluid. Hydrops amnii cases end with a malformed nonviable fetus delivered at approximately full term.

Hydrops allantois is more common. We usually diagnose and treat a handful of cows with this condition each year. With hydrops allantois there is an extreme accumulation of allantoic fluid resulting from adventitious placentation or extra areas of attachment to the uterus. In ruminants such as the cow, the placenta attaches at focal points commonly called buttons. The uterine side of the button is the caruncle and the placental or fetal contribution is the cotyledon. Every producer has observed cotyledons on expelled placentas. Unfortunately most producers have seen caruncles when a cow presents with a prolapsed uterus after calving. With adventitious placentation the placenta attaches to the areas between the caruncles. The uterus is altered forever with this abnormal development.

With this condition, the cow usually displays clinical signs in late gestation and in our experience about one month from being full term. The fluid builds up relatively fast, within a month. As the uterus swells, the rumen, or largest stomach compartment, shrinks as it is displaced. The affected cow gradually loses
condition as her capacity to consume feed dwindles. Many times these changes go unnoticed as the overall “fullness” of the animal is relatively unchanged. Eventually the cow will go off feed all together and assumes the appearance of a one ton wood tick. Without intervention the cow will die. In our facility we induce parturition to spare the life of the cow after careful examination to identify the diagnosis. Sometimes the calf will be near enough to full term to survive but without induction they will both succumb to the condition. The volume of fluid that is expelled during labor is mind-blowing and would seem to fill a 50 gal. barrel. The cow will require some nursing care but should be culled from the herd due to the adventitious placentation that has formed.

The beginning of life is awe inspiring. There is a vast amount of information communicated and translated into a living being during pregnancy. It amazes me to observe a perfect pregnancy and parturition as often as we do. The future mom creates an ideal environment to nourish the growing fetus and remove waste products. Being able to recognize abnormal behavior and parturition can save one, if not two, lives. Whether you believe the experience is Nature’s way or a series of divinely guided events, it sure is something.

Nerd Word

Hippomane – A small flat discoid aggregate of epithelial cells and urinary deposits formed in the allantoic fluid during pregnancy. Hippomanes are semisolid, brownish gray, and can be about eight inches across and one to two inches thick. They are especially common in cattle and horses and have been referred to as foal’s bread or foal’s tongue.