

Dystocia

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Abstract

This presentation discusses dystocia in cattle. Dystocia can occur due to many factors, but fetal oversize and fetal malpositioning are most common. Fetal oversize may be suspected if there is a history of previous dystocias in the same herd. Fetal malpositioning is diagnosed on physical examination. There are many techniques available to manage dystocia, including caesarian section if necessary.

Résumé

Cette présentation traitera de la dystocie chez les bovins. Plusieurs facteurs entraînent la dystocie, mais l'excès de taille du fœtus et une mauvaise présentation en sont les plus courants. On peut soupçonner qu'il s'agit d'un problème d'excès de taille du fœtus si le même troupeau a déjà eu plusieurs cas de dystocie. Quant à la mauvaise présentation du fœtus, on le diagnostique par l'examen physique. Il existe plusieurs techniques pour traiter les cas de dystocie, notamment la césarienne, lorsque c'est nécessaire.

Introduction

Bovine dystocia (prolonged parturition) is one of the most common emergency calls practitioners receive. Being able to make sound and timely decisions on treatment is essential. A good history and physical examination help the practitioner make these decisions. Knowing what is actually normal as opposed to what is truly a problem is important.

Background Information

Signs of impending parturition vary from no signs to very subtle signs to more obvious signs. Udder enlargement can occur from about four weeks prepartum (or longer in heifers) to immediately postpartum. Other signs are vulvar relaxation/swelling, pelvic ligament relaxation and loss of the cervical plug.

Parturition is divided into three stages. Stage I involves cervical relaxation and uterine contractions (without abdominal contractions) that bring the fetus into the birth canal and dilate the cervix. It usually lasts two to six hours, but can be longer, especially in heifers. Signs may include restlessness and frequent

urination/defecation. The dam may separate herself from the rest of the herd. Sometimes there are no signs of Stage I. If signs of stage I occur, but delivery of the calf doesn't follow, the dam should be checked for a calf in breech position or a uterine torsion.

Stage II involves actual expulsion of the fetus. Stage II generally takes about 30-60 minutes, but can take two to three hours in heifers. Unless problems are suspected, beef cattle should be observed from as far away as possible because disturbing them during Stage I or II can interrupt normal parturition. Since dairy cattle are used to human contact, many recommend assisting delivery, even if the delivery is normal.

Normal presentation/position is with the calf's back to the dam's back (rightside-up), with the front legs and head presented first. Occasionally the legs will be positioned above the head. In this presentation/position the calf can usually be delivered without assistance. Calves presented with the rear legs first can also sometimes be delivered without assistance. Any other presentation will require some assistance.

Stage III involves expulsion of the placenta. This usually takes place within a few hours, but can take up to a few days.

Dystocia can occur due to fetal oversize, abnormalities in the birth canal (previous pelvic fracture, excessive fat in vagina) twins, uterine torsion, failure of the cervix to dilate and a malpositioned fetus.

History

Although time is critical, there are a few questions that should be asked and can provide very important information to help in decision making. It is important to know what stages of labor have been observed and how long these have been going on. Any previous attempts to manipulate or pull the calf by others should be noted. A history of problems with the same bull can be an indication of fetal oversize, possibly necessitating a cesarian section (c-section).

Physical Exam

Overall condition of the animal should be quickly assessed. An emphysematous fetus should be suspected in cattle that are weak or showing other signs of shock. These animals may need supportive care before beginning manipulations to deliver the calf. Signs of udder

enlargement, vulvar relaxation and swelling, and ligament relaxation should be noted to determine if this is a full-term delivery or an abortion.

Some warning signs of dystocia are: prolonged Stage I; a foul odor from the vulva; ruptured membranes with no fetus; no change in stage II for 30-60 minutes (15 minutes once head is out); or abnormal presentation or position.

What to do?

A vaginal examination will usually make the problem quickly apparent. It's important to be very clean, and use obstetric gloves and lube during the examination. Although most cattle are too preoccupied with the discomfort of labor to kick, some will, so safety of the examiner should be considered. A vaginal exam can differentiate uterine torsion, cervical problems and problems with fetal positioning and presentation. Twins can take longer to sort out. Fetal oversize or problems in the birth canal that make delivery difficult are not always easily detected. In most cases, mismatch of fetus to pelvis size is a judgment call.

The first decision is whether or not the fetus can be delivered vaginally or if a c-section is indicated. Extreme mismatch of the size of the fetus and birth canal, grossly distended emphysematous fetuses and some cervical abnormalities may necessitate a c-section. In other cases, a c-section may have to be performed if manipulations, fetotomies, or uterine torsion corrections fail.

The next decision is whether a caudal epidural is indicated. This is also a judgment call. If simple manipulation of a deliverable-size calf is all that is needed, an epidural is not indicated. Actually having the abdominal contractions of the dam once delivery starts is helpful. However, with more difficult, time-consuming manipulations, an epidural is indicated. With a good

epidural, straining is decreased, which can make manipulations take less time. The longer manipulations take, the more bruising/trauma and swelling that can occur in the vagina. This can make the actual delivery more difficult.

If the calf is presented normally, but no progress is being made, traction can be placed on the calf either manually or with a "calf jack". Excessive traction by a calf jack should be avoided. Turning the chest and/or hips 45° may facilitate delivery. Too much traction too fast can tear the cervix, vagina and/or the vulva. If the back legs are presented, a hand should be placed over the tail to prevent it from flipping up and back and tearing the vagina, and the calf gently pulled.

Obstetric manipulations of malpositioned fetuses are best learned in a laboratory situation or through experience, but some general rules apply. First, adequate lubrication is essential. Second, follow the five minute rule: if five minutes have passed while performing a manipulation with no progress, try another technique. Obviously there are exceptions to this rule, but time is critical. Manipulations should be done quickly and with as little trauma to the dam as possible.

Uterine torsions can also cause dystocia. They usually occur near term and the cause is unknown. The torsion can occur cranial or caudal to the cervix, and in either direction. Treatment requires determining which way the torsion has occurred, then either rolling the animal in what is known as the "plank in the flank" technique, or performing a C-section.

Conclusions

With a thorough examination and a science-based plan, dystocias can be successfully managed to minimize injury to the dam, and increase the likelihood of delivering a live calf.