KIDDING COMPLICATIONS

By Annette McCoy, DVM
University of Minnesota
Veterinary Medical Center

DYSTOCIA

Dystocia, simply defined, is a difficult birth. The overall incidence of this problem in does has been reported at 3-5%. A lot of factors can play a role in whether a doe will have problems kidding, some due to the doe herself and some to the kid. These include:

Maternal Factors	Offspring Factors
* size of pelvis	* size of fetus
* hypocalcemia	* malposition/malpresentation/ malposture
* failure of cervix to dilate	* twins/triplets
* obesity	* congenital defects (fetal monsters)
* uterine torsion or inertia	* dead/mummified
* obstruction of pelvis	

Depending on the factor(s) involved in a dystocia, there are four choices for treatment:

1) traction (pulling)
2) repositioning (often, but not always, combined with #1)
3) fetotomy (removing the [dead] fetus in pieces)
4) cesarean section

To determine which treatment is most appropriate for your situation, you should take into account the duration of active labor, the position and number of the kid(s) if known, any previous history of dystocia, and the resources you have at hand.

Stages of Labor

Stage 1: The uterus contracts and the cervix begins to dilate in response to fetal stimulation. The fetus moves into final position for delivery. Straining is not seen, but the doe may be restless – moving around more than usual, getting up and down, and/or "nesting." This stage may last several hours, but if a doe has been acting restless all day, that may be an indication of a problem.

Stage 2: Active labor! This stage begins when the fetal membranes appear at the lips of the vulva and the "water breaks." The normal time between rupture of the fetal membranes and the first kid being delivered is about 20-30min. If there is more than one kid, there is often a break of 20-40min between deliveries, but it can be shorter. Remember that it is normal for kids to come out either front feet first or back feet first.

Stage 3: This stage begins when the last kid is delivered and ends when the placenta is expelled. This process may take 2-4 hours. A retained placenta should be suspected if more than 4 hours have passed since the last fetus was born.

When To Step In

Dystocia may present in two ways; either the doe is forcefully pushing and straining with no progress, or she is standing quietly without pushing (despite having been in active labor earlier). The first scenario may suggest a fetus that is too large or malpositioned. The second suggests uterine intertia, uterine rupture, or exhaustion. These are some situations in which you would consider stepping in to help:

- Stage 1 labor that has lasted for many hours
- Stage 2 labor that has lasted for 20-30 minutes without progress
- More than 20-40 minutes between kids
- An obviously malpositioned kid (i.e. one leg and the head out, or both front feet out, but no head)
- Signs of distress being exhibited by the doe, especially if she is having difficulty breathing

Traction

If the kid seems to be in the correct position/presentation – either with both front feet and the head out, or with both back feet out – you can apply gentle traction to the legs to help guide the kid out of the pelvis. Spread the force of the pull out along the legs as much as possible to reduce the risk of fracture. If the doe is standing, pull slightly down to allow gravity to assist the delivery; if the doe is lying down, pull slightly towards her hocks, following the angle of the birth canal. If the shoulders or hips seem to be stuck, you can gently pull one leg towards you and push one leg away from you – the slight change in angle and diameter may be enough to get past the tight spot. You can also try gently rotating the entire kid 45 degrees, since the largest diameter of the pelvis is on the diagonal. Lubrication is essential to this process! There are many lubricants available commercially; the one you use should be water-based, not oily (i.e. Vaseline is not a good choice). It is recommended to wear gloves or sleeves while assisting with kidding to reduce the risk of zoonotic transmission of disease (from the goat to you).

Repositioning

The most common malpresentations seen are legs back and heads back. Depending on the size of the pelvis and the size of the fetus, these may or may not be easily correctable.

<u>Leg Back:</u> To bring a front leg forward, slide your hand along the inside of the leg and find the hoof. Cup your hand gently around the end of the hoof (to protect the doe's tissue) and gently twist the foot so that you are bringing it underneath the body as you draw it forward. You may need to repulse (push backwards) the shoulder and/or knee to accomplish this. To bring a back leg forward, you follow the same procedure except that you approach the hoof from the outside of the leg and twist gently outward as you draw the foot towards you. You may have to repulse the hock to accomplish this.

Head Back: Follow one leg back to the shoulder, then find the neck and head. Cup the nose in your hand (or gently hook a nostril or eye socket) and turn the head towards the pelvic canal. If the doe has been pushing hard and the fetus is jammed up against the pelvic brim, you may have to repulse the entire body to accomplish this.

Malpresentations may be complicated by the presence of twins or triplets. Remember that sometimes you may have to push the fetus back into the uterus to get enough room to maneuver.

Try to correct a malpresentation for no more than 10-15 minutes. If you cannot fix the problem in that amount of time, it's time to consider calling your veterinarian.

Calling Your Veterinarian

The answers to some key questions will help your veterinarian to make the best choices possible when assisting with a dystocia.

1) How long has the doe been in labor? Has anything changed in that time?
2) What have you done to help the doe along? Have you given any medications?
3) Does the doe have any previous history of dystocia?
4) Have you had the doe ultrasounded? (How many kids does she have?)
5) Is surgery an option for this doe?

The last question may be the most important, because the best chance for a healthy doe and live kids in a complex dystocia is often cesarean section. Your veterinarian may be able to perform a C-section on the farm, or he/she may refer you to a hospital to have the procedure done. Goats generally do well undergoing a C-section, and can be successfully bred back afterwards.

If the kid is already dead and a malposition cannot be corrected, your veterinarian may recommend performing a fetotomy. In this procedure, a series of cuts are made to reduce the overall size of the fetus so that it can pass through the pelvic canal.

Other things that your veterinarian may do: administer an epidural to reduce the doe's straining, give calcium or other electrolytes if imbalances are suspected, or do an ultrasound exam to determine the number and viability of the fetus(es). You should also request that your veterinarian perform a breeding soundness exam on any doe that has experienced dystocia before trying to breed her again.

THE CRITICAL NEONATE

Once the kids are born, new challenges may arise. Kids born to a doe with dystocia are at higher risk for problems because of the extra stress associated with their birth. One marker of stress is a yellow-orange staining on the newborn, indicating that meconium (the first feces) was passed during the birth process. Your first evaluation of these neonates should encompass the ABCs of critical care: *A*irway, *B*reathing, and *C*irculation.

Stimulating Breathing

First, make sure that the airway is not clogged – clear away any remaining fetal membranes from the nose and mouth. You can use a finger to gently sweep inside the mouth to clear it of any tissue or fluid. A small bulb syringe may be moved to suck tissue or fluid from the back of the mouth or nostrils. You can tilt the newborn so its head is down, but do not shake or swing it. You can also put pressure on the nasal septum (between the nostrils) with the point of a pin or a tiny needle. Rubbing the kid, especially over the chest, and gently patting or tapping the ribs can also stimulate breathing. If these techniques fail, try inserting a lubricated finger into the anus and moving it briskly in a circular motion.

Normal newborns will stand and try to suckle within the first 30-60 minutes of life. This is critical for two reasons. First, kids are born with very little in the way of energy reserves. Just the effort of breathing and standing will deplete them, and suckling provides necessary calories. Second, colostrum contains immunoglobulins, which confer vital immunity to newborn kids, who are born without circulating antibodies. It is very important that kids get colostrum within the first twelve hours of life, because after this, the gut will not absorb the immunoglobulins. If this critical window is missed, kids are at increased risk for infection.

Intubating

For a kid that will not suckle, giving colostrum through a tube can provide vital nutritional and immune system support. If colostrum is not available, pasteurized goat milk (or whole or 2% cow milk) can be used instead to provide calories, although not immunoglobulins. Correct placement of the tube is essential because if milk is given into the lungs, potentially fatal pneumonia can result.

The esophagus is located on the left side of the neck. Tilt the kid's head up with the neck extended, open the mouth, and pass the tube to the back of the throat. The kid may or may not swallow as the tube enters the esophagus. Since the esophagus is normally collapsed, you should be able to see the tube as it passes along the left side of the neck. You can also feel the tube pass under your fingers if they are resting on the left side of the neck. If you are not sure, move the tube back and forth a little. If the kid coughs, you may be in the trachea. Do not give anything via the tube until you are sure it is in the right location.

1-2 ounces of milk is often sufficient for a first feeding, depending on the size of the kid (a general rule of thumb is 10% of body weight); feedings should be repeated every 2 hours until the kid is nursing normally.

Calling Your Veterinarian

If you are concerned about a kid that does not seem to be interested in standing and nursing or is getting progressively weaker, give your veterinarian a call. Answers to some key questions will help your veterinarian make the best possible choices when treating a critical neonate:

1) How old is the kid? Were there multiple kids born to this doe?
2) How long was gestation (is the kid full-term)? Was the birth normal?
3) Did the kid stand or nurse at any time after birth?
4) What treatments, if any, have you given? Have they helped?

Some treatments that your veterinarian might administer are intravenous fluids, antibiotics, and anti-inflammatory medications. If the kid did not get colostrum, intravenous plasma administration is an option. If neurologic damage (from lack of oxygen during birth) is suspected, support of the central nervous system, including anti-oxidants, anti-inflammatory drugs, and anti-edema drugs, may be instituted. If intense nursing is needed, your veterinarian may refer you to a hospital that offers 24-hour care.