

## **THE FOALING MARE**

**Dr. Susan A. Mende, DVM, Dipl ABVP**

The birth of a foal is a swift, explosive happening. It is very different from the birth of a human or calf, in which labor can be long and protracted. During gestation, the mare's body produces the hormone progesterone, which is responsible for maintaining the pregnancy (mares that are supplemented with the product Regumate<sup>®</sup> are deficient in progesterone and must rely on this synthetic replacement hormone to remain pregnant). A critical hormonal shift occurs about three weeks before delivery. The hormone *relaxin* begins to direct a softening effect on the pelvic area, and the udder begins to "bag up". As delivery nears, the relaxation of the pelvic ligaments and vulva becomes more clearly noticeable. The mare will begin "waxing", when honey-like, waxy beads form on the ends of her teats. The waxy milk precursor may release into viscous strings and give way to milk. This signals that birth is likely to occur within a day or possibly within hours. The mare's delivery environment should be familiar, routine, and quiet. Most mares foal in the evening, between 6 and 11 pm. When observing the mare, be as unobtrusive and inconspicuous as possible.

### **The first stage of labor**

With many mares, the first stage of labor can slip by quickly and quietly. Most mares will exhibit some of the following signs that birth is at hand: sweating on the chest or behind the elbows, increase in skin temperature, general uneasiness, pawing and pacing in the stall, turning the head to look at the flanks, or milk dripping from the teats. Many of the signs of the first stage of labor are similar to those of mild colic, so be careful to distinguish true labor from gastrointestinal distress. If she eats, urinates, and defecates frequently while exhibiting the above signs, then labor is in progress.

### **The second stage of labor**

"Breaking water" signals the onset of the second stage of labor. When the placenta ruptures, the sound of rushing water may be accompanied by appearance of a small amount of yellowish-brown fluid. Second stage labor is the initiation of smooth muscle contractions in the uterus. The force of contractions is intensified by the mare's extremely powerful abdominal press, which results in a birth that is often described as violent. Within about five minutes of breaking water, a gray-colored bubble or sac should appear between the lips of the mare's vulva. At this time, the mare usually lies down. The grayish sac, or amnion, should rupture as the mare lies down. If it does not, then you need to tear open the tough membrane. The tips of the foal's front feet, pads down with one slightly ahead of the other, should be visible. The legs should continue to emerge in this fashion with the nose appearing just over the knees.

Nature works smoothly and efficiently in 90% or more of the cases, but in those few instances where problems do develop, there is little margin for error. At the first sign of trouble in a foaling mare, summon your veterinarian! Ideally, your veterinarian will have been notified in advance that the mare is approaching delivery. Of the wide range of foaling problems that may occur, there are two potential situations that you should attempt to correct yourself if a veterinarian is not present. This is because there is not enough time to call a veterinarian should one of these situations occur:

(1) If the muzzle is closer to the ankles than the knees, brace your hands on the foal's head and pull the legs forward. Otherwise, the foal's legs could hook on the mare's pelvis at the elbow. If one forefoot is about six inches ahead of the other, the elbows have a better chance at getting through the birth canal.

(2) If the foal seems to get hung up after his shoulders have cleared, he could be in a hip lock. The umbilical cord may become pinched and the vital oxygenized blood may be cut off before the foal can begin breathing. Time is of the essence. Quickly apply steady downward pressure on the front legs toward the mare's hocks and heels.

If you suspect something abnormal (*e.g.*, two front feet but no head, pads of the feet are facing up with no head visible, the tail is visible with no head or legs, or excessive and prolonged straining from the mare) get help immediately! These mal-presentations are not for the inexperienced to tangle with; the force of a mare's contractions can break a man's arm. Get the mare to her feet and call a veterinarian at once. Keep her walking (this stops some of the contractions and pressing) until help arrives.

If all is going well, the force of nature will continue at its own pace. The foal will come rushing from the mare quickly, suddenly, explosively, and land in a heap. Peel back the amnion (gray membrane) to make sure the foal has begun normal breathing. Clear out the nostrils and mouth with a towel or your fingers. Allow the mare and foal to lie quietly for several minutes. The foal will receive up to one pint of rich, oxygenated blood from the placenta through the still pulsating umbilical cord. This is a bonus that will give him the energy he needs to stand and nurse. Although this is an exciting time, it's important to keep the foaling environment calm and as quiet as possible so the mare won't feel threatened and jump to her feet, breaking the cord prematurely and often too close to the foal's body. Eventually the motions of mare and foal will break the umbilical cord at a naturally weak point inches from the foal's abdomen. Swab the navel stump with chlorhexidine solution (studies have shown that old-fashion iodine is much too caustic!). This cauterization will help block the entrance of bacteria into the wide-open portal to the foal's system.

The average foal is on his feet within an hour. If more than an hour has passed and the foal is not up yet, then it is time to call for help. Once on his feet, the foal may seem confused, stagger blindly, bump into the wall, and look in all the wrong places for milk. Give the baby time, but if two hours or more have passed without nursing, call for help. It may be best to milk the mare and give the foal his first meal from a baby bottle or stomach tube.

The thick, honey-yellow colostrums (first milk) is filled with antibodies to give the newborn passive immunity (short-acting protection) from diseases until his own immunity kicks in. This is the very reason it is so important that the mare is boosted with her infectious disease vaccines one month prior to foaling. Colostrum is also laden with glucose to give the foal energy, and it has a laxative effect on the foal's system, helping him pass the meconium (fecal waste matter accumulated during gestation). Use of antibiotics and tetanus antitoxin is only recommended under certain circumstances and is not routinely given. An enema may be given about seven hours after birth to prevent impaction of hard, dry fecal material in the baby's rectum.

### **The third stage of labor**

The third stage of labor is the shedding of the placenta, which often subjects the mare to the most intense and prolonged pain. Immediately after delivery, the amnion (afterbirth) should be tied in a knot so it doesn't drag on the ground. This is especially important with a maiden mare, which could become spooked at the unfamiliar mass under her tail. Do not tie the amnion to the tail, because its own steady weight will supply the traction needed to assist the mare's contractions. Manual force should never be applied, so whatever you do, do not pull on it! If the afterbirth is not expelled within four hours, a condition called Retained Fetal Membranes, call your veterinarian. Once the mare has passed her placenta, your veterinarian should examine it carefully to make sure it is all there. Save it until the vet arrives at your farm. Tags of afterbirth left inside the mare can lead to metritis or acute laminitis.

The first three days of the foal's life, especially the first 24 hours, are the most critical to survival. The best indicator of health is a foal that nurses enthusiastically and often. Even if all went well with delivery, a 'Well-Baby' examination by your veterinarian is performed when the foal is around 18 hours old. This will check with a test that the foal received enough colostrums (if not, there is still time to supplement with banked colostrums before a critical shift in his ability to absorb the stuff occurs at 24 hours of age), check the mother, check the placental remnants, and give the new foal a clean bill of health or intercept any congenital problems or those resulting from complications of birth.