DELIVERY AND CARE OF THE NEWBORN FOAL

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Horse owners, farm managers and veterinarians anticipate the arrival of foals every spring. While we all hope for healthy, happy foals that require little assistance, Mother Nature doesn’t always comply. Basic knowledge of the foaling process and normal neonatal foal appearance and behavior is essential for initiating treatment to foals that may need additional help.

The normal gestation length for mares averages 335-345 days from their last breeding date. Gestation length will vary between mares and even between years in the same mare. As the mare nears her foaling date, she should have mammary gland development and begin waxing (wax-like secretions on the teat from colostrum production) (Figure 1). Most mares will foal within 1-4 days of waxing. Mares that have mammary development earlier in pregnancy (more than a few weeks before the expected foaling date) should be evaluated by a veterinarian. Premature udder development is an indicator of placentitis (inflammation or infection of the placenta), which requires aggressive treatment and may result in loss of the pregnancy. A veterinarian should also evaluate mares that leak an excessive amount of milk, which can be an indicator of impending abortion. Mares that leak large volumes of milk may also have inadequate colostrum (antibody rich milk required for appropriate foal immunity) at the time of delivery, which will require additional care for the foal. Pregnant mares have specific vaccination requirements in order to best protect the foal. These requirements may vary based on geographical location, type of housing, etc. so should be determined on an individual basis with your veterinarian.

The labor process is divided into three distinct stages. Stage 1 labor begins with the onset of contractions and generally lasts one to two hours. Mares may act restless, sweat, paw, kick at their abdomen, lie down and get up, and urinate frequently. Similar signs may be seen with colic, so a veterinarian should examine the mare if these signs last more than two hours without signs of foaling. Stage 1 of labor moves the foal into position within the birth canal. The fetal membranes (chorioallantois) may become apparent at the mare’s vulva. Stage 1 labor ends when the fetal membranes rupture, also referred to as “breaking water”. A large rush of fluid will exit the mare at that time.

Stage 2 labor involves the actual delivery of the foal. This stage should progress quickly and result in delivery of the foal within 15-20 minutes. If the foal has not been delivered within 20-30 minutes, then intervention by a veterinarian or experienced foaling attendant may be required. The mare may lie down, stand or even roll during this stage of labor. The normal foal presentation is similar to a diving position: both front feet should come first, with one foot slightly in front of the other and the soles facing down. The nose should be on top of the front limbs
and the neck, shoulders, abdomen and hindquarters should then follow. If the foal presents in any other fashion (no head, only one foot, soles facing upward or tail first), then a veterinarian should be called immediately. Improperly positioned foals are a true emergency and require immediate attention if the foal is to have a chance of survival.

Stage 3 labor begins after delivery of the foal and consists of expulsion of the afterbirth (placenta). The placenta should be passed within 1-3 hours of foal delivery. If the placenta has not been passed within three hours, then a veterinarian should be contacted. A retained placenta can cause severe infection and laminitis in the mare, which can unfortunately be fatal in some cases. Aggressive treatment may be required in some mares. A veterinarian should examine the placenta once it has passed to ensure that it is complete and normal in appearance. Small portions of the placenta may sometimes remain inside the uterus, which can also lead to severe illness in the mare. An abnormal appearance (unusual color, thickness, etc.) to the placenta may indicate infection, which could have an effect on the foal’s health and treatment (Figure 2).

The foal should be breathing and have a palpable heartbeat at the time of delivery. If the foal is breathing and moving its head and limbs, then the mare and foal should be left alone for several minutes. The foal may continue to receive blood from the mare through the umbilical cord at this time. Do NOT cut the umbilical cord. If it does not break on its own during the birthing process or as the mare and foal start to move around, then you may gently break the cord by hand. There is a narrow region in the umbilical cord approximately 1 inch from the umbilicus – this is the ideal place for breakage. Grasp the cord on either side of the narrowed region and gently twist and pull to encourage breakage. Cutting the cord (with scissors, etc.) causes more severe bleeding from the umbilicus than breaking or tearing the cord, which helps induce a blood clot at the end of the umbilicus. The umbilicus should be dipped in a dilute betadine or chlorhexidine solution twice a day for the first several days of life to help prevent infection.

A normal foal should be able to sit sternal within 5 minutes of birth and stand by one hour of age. They should be able to nurse by two hours of age. A veterinarian should evaluate any foal that is unable to sit sternal, stand by 1-2 hours of age or nurse by three hours of age. The foal should be closely monitored for appropriate nursing during the first day of life (Figure 3). Foals are born without antibodies and receive their antibodies by ingesting colostrum during the first 18-24 hours of life. Colostrum is a special form of milk that is produced by the mare at the time of birth. It contains antibodies and other factors that are important for the foal’s immune system development. Foals that don’t receive an appropriate volume of good quality colostrum will have low antibody levels and are more prone to infection. A blood IgG level indicates if the foal received sufficient colostrum. If the IgG level is low, the foal may be tubed with more colostrum or receive plasma to help increase the antibody level.
The normal foal will urinate during the first 12 hours of life. If the foal has not urinated by that time or is posturing to urinate, but not passing urine, then a veterinarian should be contacted. Likewise, foals will pass meconium during the first 12 hours of life. Meconium is the “first feces” and is dark brown in color (Figure 4). It is usually in small, hard balls, which may require some effort to pass. A veterinarian should evaluate any foals that are straining to pass the meconium, or showing signs of abdominal pain (flagging tail, rolling, swollen abdomen, etc.). A soapy water enema may be required to facilitate passage of the meconium. Once the meconium has passed, normal foal feces will be yellow-brown in color and paste-like in consistency.

All foals should have an examination by a veterinarian between 12-24 hours of age. The veterinarian will listen to the foal’s heart and lungs, palpate for fractured ribs, check the eyes for ulcers and entropion (lower eyelid that rolls in toward the globe), and evaluate conformation. The veterinarian will also draw blood to check IgG levels. Additional blood work may be required if any abnormalities are found during the physical exam. The veterinarian will also check the mare for any bruising or tears that occurred during the foaling process. They will evaluate the placenta to ensure the entire placenta has passed from the mare. Depending on the examination, your veterinarian may recommend medications or other treatments for either the foal or mare.

In conclusion, close monitoring of the mare and foal is essential for early recognition of abnormalities. All foals should have a veterinarian examination within the first 12-24 hours of life. Foals that fail to stand and nurse in a timely fashion require more immediate attention. Early recognition and treatment of abnormalities will help give foals the best chance for a long, healthy life.