Foaling, Dystocia, Placentitis and Retained Placenta

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With peak foaling season fast approach-ing, anxiety among expectant mare owners will be on the rise.

Fortunately, dystocia or difficult birth, is relatively uncommon in the mare, with an incidence of 1 to 4%.

Foaling, termed parturition, has three stages of labor.

Stage 1 involves mild to moderate uterine contractions, dilation of the cervix and rotation of the foal within the uterus. Stage 1 lasts for 30 minutes to 4 hours and the mare exhibits restlessness and mild colic signs.

Stage 1 ends and **Stage 2** begins when the chorioallantoic membrane of the placenta ruptures and the allantoic fluid is discharged (i.e. "the water breaks"). Stage 2 of foaling involves strong uterine contractions and expulsion of the foal through the birth canal. Stage 2 lasts 20 to 30 minutes.

Dystocia is defined as prolonged Stage 1 or 2 of foaling. Dramatic, excessive straining by the mare without advancement of the foal through the birth canal is an early indication of dystocia.

The **third and final stage** of foaling involves passage of the placenta or fetal membranes and initiation of uterine involution. Mares typically will exhibit episodes of "cramping" during the delivery of the placental membranes. Lack of these crampy episodes can be a early indication of retained placenta issues. Contraction of the uterus occurs very rapidly after foaling. Within 12 hours after delivery the uterus reduces to one and one half times its normal non-pregnant size. Alteration of this uterine contraction process predisposes a mare to retained placenta. The placenta is normally passed within 2 hours following foaling and is considered "retained" if not passed within 6 hours after foaling. Retained placenta is the most common postfoaling problem encountered in mares, with an incidence of approximately 5%. Retained placental membranes quickly become contaminated with bacteria which enter the uterus and can lead to severe uterine inflammation and infection. Uterine infection and inflam-mation can lead to serious consequences regarding a mare's immediate health and long term reproductive capabilities.

Abortion, dystocia, placental membrane inflammation, twin pregnancy, premature foaling, uterine musculature inertia, and endophyte / fescue exposure are all risk factors for retained placental membranes.

Placental membrane inflammation, termed placentitis, is a common cause of late term abortion in mares. It is most commonly caused by ascending infection of bacteria or fungus through the cervix into the uterus. Poor conformation or damage of the external vulvar opening, vaginal fold or cervix allow penetration of infections past these barriers. Evaluation of these structures as part of a breeding soundness examination is important to avoiding the emotional and financial woes of abortion and retained placentas. Further, placentitis resulting from hematogenously (via the bloodstream) spread of infections underscores the importance of routine dental care, vaccinations, deworming, nutrition and management practices.

Management of the placental membranes after foaling should consist of tying them into a ball above the mare's hocks to prevent contamination and tearing. Tying additional weight onto the placenta is sometimes recommended but this can result in uterine wall damage.

All passed placental membranes should be examined for completeness. In the majority of cases of retained placenta, retained membranes are observed hanging out of the vulva, but in some cases a portion can adhere to the uterine wall and tear away. The tip of the nonpregnant uterine horn is the area most commonly involved, but any area of placental inflammation is prone to this adhesion process. If there is doubt regarding the completeness of the placenta passed after foaling, further investigation via veterinary examination is warranted. Physical exam, vaginal exam, ultrasound exam of the uterus and blood work are procedures worth exploring, because the longer the retained placenta condition goes unresolved, the more likely the mare is to develop serious health issues such as laminitis, endotoxic shock, and loss of fertility. Not all mares with retained placenta will become seriously ill, but all presumably will have some degree of fertility loss, which can be just as important to the mare's livelihood and value as breeding stock in the long run.

Routine administration of oxytocin, a hormone which stimulates uterine con-traction, is commonplace among many breeding operations. Oxytocin is given intra-muscularly beginning 2 to 4 hours after foaling if the placenta has not passed by that time. Oxytocin has a short duration of action and is given every hour for a maximum of 6 treatments. Suckling of the foal also stimulates natural release of oxytocin, and many mares will pass their placenta within a short time of the foal nursing.

There is great variation in a mare's sensitivity to oxytocin; therefore, initial dosing of oxytocin should begin at lower dosages. Cramping generally begins within 10 minutes of oxytocin administration and passage of uterine fluid will be observed. The oxytocin dose should only be high enough to cause mild cramping or colic signs. If the mare exhibits rolling behavior after oxytocin administration, the dose should be decreased and care should be taken to safeguard the well-being of the foal and personnel. Failure of oxytocin therapy or clinically ill mares should always result in veterinary examination. In short, management of retained placenta and subsequent follow-up procedures should be performed under the guidance of an experienced veterinarian to insure preservation of the mare's fertility, health and financial value as breeding stock.