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*A Tradition of Leadership and Excellence in Equine Medicine*

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## **Early diagnosis and treatment of high-risk pregnancy in the mare Philip M. Matthews, D.V.M.**

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A common cause of abortion in the mare is placentitis. The cause is most often bacterial, sometimes fungal, and are the same organisms that we deal with in combating uterine infections (endometritis) when trying to get mares pregnant. These infections have three sources in the pregnant mare. The organism may reach the placental (or fetal/placental unit) through the blood stream once gaining entrance to the mare's body through some other body system (such as lungs or gut). The infection is thought to sometimes lie in the uterus in a "dormant" or sub clinical state and then worsen after the mare becomes pregnant causing placentitis and abortion. However, probably the most common source of infection in causing placentitis is an ascending infection or one that travels through the cervix from the vagina into the uterus.

For matters of discussion, I think it is convenient to put high risk pregnancies in to three categories: 1) Those mares with a history of abortion. 2) Those mares that are diagnosed early as having probable placentitis, but don't as yet have clinical signs. 3) Mares that have developed clinical signs of pending abortion such as mammary development and/or uterine discharge. Obviously any mare in category one can also be in category two or three.

For several years some veterinarians have been treating mares in category one in an attempt to ward off possible abortion. They have claimed success, but recently there has been a study that helps support that this treatment is effective in the treatment of early placentitis. Currently there are several diagnostic measures that can be taken to evaluate if a mare is developing placentitis before she is showing any clinical signs. Hormonal levels in the mare may be helpful; a transabdominal ultrasound may be helpful to evaluate the placenta, fetus and fetal fluids; and finally there is a transrectal ultrasound that can evaluate the status of the placenta near the cervix. I want to address the last method, transrectal ultrasound, because it is the easiest, least expensive and may be the best at diagnosing problems early.

To perform this examination the veterinarian examines the mare rectally with an appropriate ultrasound. Basically the veterinarian is concerned with three findings: appearance of the placental fluid, integrity of the placental-uterine bond, and the combined thickness of the uterus and placenta (CTUP). It is the thickening of this CTUP that is often the earliest diagnostic sign that a pregnancy may be getting into trouble.

Most mares are checked through 90 days of their pregnancy as a matter of routine. Currently it is recommended that if you have a mare in category one (above) or have a mare that you suspect may be a high risk for any other reason, that you should continue to examine her monthly in order to evaluate her CTUP, placental fluids, and placental integrity. If a problem is diagnosed the mare can often times be successfully treated resulting in carrying the foal to term and delivering a foal which can develop normally. If these mares are not diagnosed early they will not be discovered until they abort, or best case scenario, fall into category number three which is much more difficult to manage with a lower success rate.

Treatment of these mares can vary somewhat they but have been successfully managed with daily administration of SMZ's, Regumate and pentoxyphyline. Not all veterinarians have developed the technique of measuring CTUP in the pregnant mare, but I would advise you to discuss this procedure with him/her if you feel you may have a high-risk mare.