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Handling Dangerous Hydrops Conditions in Pregnant Mares

A broodmare's belly will undoubtedly grow as her fetus matures, but any rapid or unexpected expansion—particularly during the last trimester—is cause for concern. She might be suffering from one of two life-threatening conditions: hydrops allantois or hydrops amnion, characterized by excessive accumulations of allantoic or amniotic fluid in the uterus, respectively.

Fortunately these conditions are extremely uncommon; however, an incorrect diagnosis can quickly equal death for both the mare and her unborn foal. If detected early, veterinarians can manage these cases, so Nathan Slovis, DVM, Dipl. ACVIM, CHT, of Hagyard Equine Medical Institute, in Lexington, Ky., described how to diagnose and treat them as well as educate owners about what to expect at the 2013 American Association of Equine Practitioners convention, held Dec. 7-11 in Nashville, Tenn.

Veterinarians don't know what causes hydrops conditions. But they do know that the disorders are life-threatening, Slovis said, because if undetected or untreated they can result in abdominal wall hernias, prepubic tendon rupture, and cardiovascular shock.

"The condition is often detected by the horse owner as a sudden onset (over a period of a few weeks) of abdominal enlargement, ventral edema (fluid accumulation in the abdomen), colic, lethargy, anorexia, tachycardia (rapid heartbeat), and dyspnea (difficulty breathing, due to pressure on the abdomen)," he said. Misdiagnoses include twins and other causes of colic or ventral edema.

To make a definitive diagnosis, Slovis said the veterinarian should perform a transrectal examination of the reproductive tract, which will reveal a large, fluid-filled uterus, and transabdominal ultrasound to detect abnormally abundant (110-230 L of allantoic fluid compared to the normal 8-18 L) fetal fluids.

Upon diagnosis, Slovis said veterinarians should discuss with owners the risks and prognoses for both the mare and fetus and establish whether they want to try to save either the mare or her unborn foal. If the veterinarian diagnoses the hydrops condition early in gestation, he or she might suggest terminating the pregnancy. Those diagnosed later in gestation typically require controlled drainage of the fluid—a one- to three-hour procedure that usually leads to pregnancy termination, Slovis said.



Photo: Courtesy Dr. Nathan Slovis

"Mares that present during the last two to four weeks of pregnancy may be managed by conservative therapy (an abdominal wrap for support, weekly veterinary evaluation, and having veterinary staff available for correction of dystocia—a difficult birth—and hypotensive shock) or partial drainage," he said. "The aim of partial drainage is to maintain pregnancy for as long as possible for additional fetal maturation to occur."

In the more than 30 hydrops cases Slovis and his Hagyard colleagues have treated over the past decade, he said nearly all of the mares recovered well and were discharged from the clinic. None of the foals, however, survived. Common side effects Slovis said he's seen post-treatment include retained fetal membranes and dystocia.

Slovis concluded that early detection, management, and client education about hydrops conditions are key to a successful outcome. The drainage procedure is relatively easy and, although ideally performed in a hospital setting, can be performed in the field if necessary. Affected mares can be bred back without recurrences, but there is some indication that the condition is hereditary, so Slovis suggested breeding back to a different stallion.