

## CLINICAL CASES: NON-TRADITIONAL TREATMENT PROVES BENEFICIAL

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A 9-year old, Hanoverian mare that had entered the ET program this past season was bred with presumably infected semen since her uterus contained a moderate amount of fluid within 7 days after insemination. A uterine culture and cytology revealed an active Pseudomonas aeruginosa infection. During the cycle following intrauterine antibiotic therapy, the mare was bred and an embryo recovery attempt was performed. No embryo was recovered. During the next heat period, she accumulated fluid in the uterus. This time, the mare was primarily infected with Enterobacter aerogenes. After thorough treatment,

she was recultured and sent home. At this point, the owner of the mare decided not to continue with the ET program but to give her a little rest from treatment and breed her to keep the pregnancy. The mare returned to ERC 4 weeks later again with fluid in the uterus that turned out to be a Pseudomonas



**Figure 1. Vaginal discharge is a common indicator of uterine infection.**

infection. During those 4 weeks she was away, an outside practitioner cultured and treated this same mare for an Escherichia coli infection. By this time, it was quite clear that this mare was either getting reinfected with contaminated semen or had a compromised uterine defense mechanism that was leaving her vulnerable to repeated infections. In addition, we now have a concern that all of the antibiotic treatments this mare had been exposed to may create an environment in the uterus conducive for fungal or yeast growth. It was our



**Figure 2. A uterine culture is being performed to identify the presence of bacteria.**

opinion at ERC to stop antibiotic therapy and focus on reestablishing a competent uterine defense system. We recommended to the mare owner that no more breeding be done on this mare until next season. It was already late August, so we thought the focus should be on getting her uterus back to a healthy state. After some thought, the owner wanted to see if we could breed and treat her during the same cycle in order to give her one last shot without further compromising her uterus. With this in mind, our game plan was to first lavage the uterus once she came into heat. To rid the uterus of fluid and large populations of bacteria, 1 liter of sterile saline was flushed per day for 3 days. Once a follicle was at least 35 mm in diameter, hCG was given. Twenty-four hours later, the mare was bred with 1 billion progressively motile spermatozoa. This mare happened to double ovulate which helped our chances. After the first ovulation, a rather unconventional treatment was administered. This mare's uterus was infused with 100 ml of autogenous estrual plasma plus 3 g Ticarcillin disodium daily for 3 days. This is simply plasma from blood that has been taken from the same mare while she was in heat. Although there are

mixed feelings from researchers as to its efficacy, we felt that this was one of our last options with this mare. The theory behind using plasma from a mare in heat is that the properties (opsonins, particularly complement) within the plasma will enhance phagocytic function by attaching themselves to the bacteria present. This makes the bacteria more attractive to phagocytes (engulfing

cells). After treatment, the mare was monitored for fluid retention and then examined for pregnancy 12 days later. Fourteen days after ovulation the mare was diagnosed as pregnant with a single vesicle. She was sent home at the 25-day mark when a heart beat was detected. All involved, including the mare owner, were very pleased at the outcome.