

Advanced Equine Theriogenology Course

By Wendi Wilson and W. B. Ley

Endometrial Cysts

Question: I have a 15-year-old mare that has a very fertile history despite several endometrial cysts, some of which are quite large. Last year she suffered early embryonic death (EED) between 45 and 90 days, and when checked open in the fall was seen to have several huge cysts (30-40 mm) in the uterine body on ultrasound. My questions are: Is there any value in trying to rupture or remove these cysts prior to breeding her again? Does anyone have any experience treating these mares? Is it better to leave them alone? I would really appreciate any input that you may have.

Response: Endometrial cysts are fluid-filled structures that arise from the mare's endometrium. Cysts are classified as glandular or lymphatic, however, previous research has shown that all grossly or ultrasonically visible cysts are lymphatic (Colahan). These cysts are thought to develop from obstructed lymphatic channels and are seen more frequently in aged mares with fibrotic changes in the uterus.

The significance of endometrial cysts as a cause of infertility is unclear (McKinnon/Voss). However, large endometrial cysts may restrict implantation or mobility of the early conceptus. The conceptus must be motile during the first 16-17 days of gestation to prevent luteolysis and ensure recognition of pregnancy. Later in pregnancy, contact between the cyst wall and the yolk sac or allantois may prevent absorption of nutrients (McKinnon/Voss). Cysts may also be a frequent cause of spontaneous abortion or resorption in early pregnancy (Wilson).

There are several methods used to remove endometrial cysts. Chemical curettage with agents such as hypertonic saline, hydrogen peroxide, dimethyl sulfoxide (DMSO) and kerosene have all been used with varied degrees of success. Aspiration or rupture of cysts with endoscopic biopsy instruments or intrauterine surgery are also reported methods of treatment, however these methods are more invasive and technically difficult (Blikslager). Laser ablation is being used with success, however, this may not be practical for some practitioners due to expense of the equipment. If the entire uterine cyst is not removed using any of the above treatments, the cysts often return (Blikslager).

Until further research is done proving that cysts pose no threat to fertility and are not an important cause of early embryonic death, removal of endometrial cysts seems to be the sensible thing to do. Several treatment methods are available, which are safe and effective for cyst removal. This mare needs to be evaluated for further causes of infertility and embryonic death to determine if something other than her numerous endometrial cysts contributed to her previous history of EED last year. A breeding soundness evaluation, including uterine biopsy and cultures, may be indicated to exclude other underlying problems. Fibrosis, adhesions, or other changes associated with endometriosis should also be noted.

References:

1. Blikslager AT, Tate LP, Weinstock D. Effects of Neodymium:Yttrium Aluminum Garnet Laser Irradiation on Endometrium and on Endometrial Cysts in Six Mares. *Veterinary Surgery* 1993; 22, 5:351-356.
2. Colahan PT, Mayhew IG, Merrith AM, Moore JN. *Equine Medicine and Surgery*. St. Louis Mosby, 1999:1172-1173.
3. McKinnon AO, Voss JL. *Equine Reproduction*. Philadelphia Lea and Febiger

1993:256-257, 394.

4. Wilson GL. Diagnostic and therapeutic hysteroscopy for endometrial cysts in mares. *Veterinary Medicine*. 1985;80:59-63.