Endometrial Cysts
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Uterine cysts are fluid filled structures that can occur anywhere in the normal or chronically inflamed endometrium. \(^{(6)}\) They usually project outward or away from the surface of the endometrium. The incidence of endometrial cysts in the general mare population has been reported to be 1-22%, while in subfertile and older mares as high as 55%. \(^{(1,8)}\) It has therefore been suggested that endometrial cysts may reflect senility of the uterus and may be commonly associated with mixed endometrial disorders. Additionally, histologically “cysts” mares tend to have a higher biopsy grade when compared to “no cyst” mares. \(^{(5)}\) However endometrial pathology, biopsy grade and fertility cannot be predicated based on their presence alone. \(^{(5)}\) The questions then arise, as to what does their appearance mean? Should we do something about them? and, what can we do?

Both lymphatic and glandular cysts occur in the endometrium of the mare. Lymphatic cysts are most common. They arise from collections of lymphatic fluid in the endometrium or myometrium, usually due to obstructed lymphatic channels or perhaps by gravitational effects of a pendulous uterus. \(^{(3,8,9)}\) Multiparous mares with uteri that have undergone fibrotic changes are most prevalent with size varying from a few millimeters up to 15 cm in diameter. \(^{(9)}\) Lymphatic cysts are cylindrical or spheroidal structures that can be pedunculated or sessile. \(^{(9)}\) They are usually thin walled, round, elongated and may be individual or multilobular, divided by septa. They are most commonly located close to the bifurcation at the base of the uterine horns ventrally. \(^{(1,8)}\)

In contrast, glandular cysts are a distention of uterine glands caused by periglandular fibrosis. \(^{(3,8)}\) They are usually microscopic to a few millimeters in diameter, are embedded in the endometrium and can be found in any area of the uterus. \(^{(3,8,9)}\) Glandular cysts are not common and are usually found as an incidental finding during hysteroscopic examination or on histology. \(^{(4,9)}\) Conversely, lymphatic cysts can be diagnosed through transrectal palpation, by direct intrauterine palpation via the cervix, through hysteroscopy, endometrial biopsy, ultrasonography, and post mortem examination. \(^{(4,9)}\)

The significance of the presence of endometrial cysts is still a matter of controversy. \(^{(8)}\) The concerns seem to be differentiating them from early embryos and whether or not they are associated with loss of pregnancy, especially during its early phases and infertility. \(^{(3,4)}\)

The increased use of transrectal ultrasonography has enhanced the practitioner’s ability to differentiate early embryonic vesicles from endometrial cysts. In mares that have a few small cysts, ultrasounding the mare pre or post breeding or ovulation and mapping of endometrial cysts, can aid in pregnancy diagnosis by comparing ultrasonographic images. Mares that have numerous clusters or multilobular cysts may need repeat examinations before determination of a pregnancy by increasing vesicular size or a visible heart beat, can be established. It has also been shown in some cases that
the presence of numerous or large endometrial cysts (2.5cm) can impede mobility of the embryonic vesicle and restrict the ability of the early conceptus to prevent luteolysis after day 10, thereby blocking maternal recognition of pregnancy. \(^{(3, 8)}\) Additionally, by having the yolk sac or allanois in contact with a cyst versus the endometrium, absorption of nutrients may be prevented resulting in early embryonic death. \(^{(4, 8)}\) During placentation and gestation avillous areas were observed opposite some endometrial cysts, however location of the cyst within the endometrial stroma determined its influence on placentation.\(^{(2)}\) This supports the opinion that cysts do not necessarily interfere with fetal development, but may if they are superficial, large and extensive, reducing the total area of placental exchange. This may in an older mare with placental insufficiency be an additional insult.

Various treatments have been proposed to include; endometrial curettage, puncture by uterine biopsy punch, puncture or aspiration during hysteroscopic examination, snare electrocoagulation via hysteroscopy, repeated lavage with warm saline or ablate manually. \(^{(3, 7, 9)}\) At Hagyard Davidson McGee large pedunculated cysts are removed when the mare is in heat, by manually snaring the cyst with a gigli wire introduced through a steal double mare catheter. Once the snare is around the base gradual sawing motion will cut the cyst from the endometrium. This can usually be accomplished without rupturing the cyst with minimal removal or damage to the underlying endometrium. Care must be taken not to remove more that the epithelial lining. A minimal amount of hemorrhage is associated with this procedure and it is recommended to lavage the mare’s uterus for the proceeding couple days. Smaller more numerous cysts are usually removed via hysteroscopic laser. This technique has not been determined to be satisfactory for large cysts since to much heat is generated in order to destroy the cyst, increasing the risk of damage or tearing the uterus. Smaller cysts however, are easy to find and destroy. Lasering the cyst at the thinnest section until complete penetration through the wall has been made releases the fluid contents with immediate visible shrinkage. Care must be taken not to laser blood vessels on the cysts surface making visibility difficult.

It is the author’s opinion that most cysts do not cause a problem, but are usually a sign of an underlying one. These mares are usually older mares with poor uterine clearance and benefit tremendously by simply using uterine lavage and oxytocin in their breeding regimen. Where cysts create a problem is in the distinction or recognition from a pregnancy, however this is more of an inconvenience than a problem. Cyst removal therefore should be delegated to those mares with poor reproductive histories that have large cysts that may obstruct embryo movement or those mares with numerous small cysts that may prevent early embryonic growth or severely compromise the placenta.
References


