Results of hysteroscopic examinations performed as part of breeding soundness evaluations on mares presented for infertility—a retrospective study

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Hysteroscopy is a valuable diagnostic tool when trying to determine the cause of infertility in the mare. While traditional reproductive diagnostics (transrectal palpation and ultrasonography of the reproductive tract, endometrial culture, cytology and biopsy) identify the majority of pathologies, hysteroscopy is useful as an advanced means of assessing the uterine environment. Hysteroscopy is included as part of a breeding soundness exam for most mares presented for infertility at Rood and Riddle Equine Hospital. A review of all hysteroscopic examinations performed on mares presented for infertility between 2008 and 2015 was conducted to determine the incidence of pathology identified with this diagnostic tool. Hysteroscopic evaluations were performed during diestrus with the mare restrained and sedated in stocks. A one meter flexible endoscope was used to perform this procedure with air used to insufflate the uterus for visualization. A total of 121 hysteroscopic examinations were performed. Fifteen of these examinations were performed on mares presented for hydrointubation of the oviducts. Two of these examinations revealed abnormal findings that explained the mares’ infertility. A piece of foreign debris was identified in one mare’s uterus and a marble was found in the other. Of the 108 examinations performed solely as part of the breeding soundness examination pathology was identified in 39% (45/108) of the cases. Abnormalities identified included discrete, discolored endometrial plaques 14.8% (16/108) associated with fungal or bacterial growth, intraluminal foreign debris 1.9% (2/108), excessive and overly viscous mucus 6.5% (7/108), retained endometrial cups 5.5% (6/108), excessive fibrosis or abnormal anatomy due to cesarean section scars 2.7% (3/108), adhesions/scarring 3.7% (4/108), diffuse fungal endometritis cases 1.9% (2/108), and cases classified as other 4.6% (5/108). These cases included a cervical diverticulum, an endometrial diverticulum, lymphosarcoma, endometrial discoloration, and punctate lesions of unknown etiology. In several cases the traditional reproductive diagnostics (endometrial culture/cytology/biopsy and transrectal palpation and ultrasound) failed to reveal any pathology, and only following hysteroscopic identification of the pathology could an appropriate treatment plan for the mare be initiated. The high percentage of abnormalities identified with this diagnostic modality highlights the importance of this procedure as part of an infertility evaluation.

Keywords: Hysteroscopy, uterus, endometritis, infertility