Laparoscopic Evaluation of Oviductal Patency in the Standing Mare

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The presence of oviductal plugs reduces transport of beads to the uterus and may be a source of infertility in mares with a history of chronic unexplained subfertility. Authors’ address: Texas A&M University, 4475 TAMU, College Station, TX 77843; e-mail: Carnold@cvm.tamu.edu. *Corresponding author. © 2011 AAEP.

1. Introduction

Oviductal occlusions consisting of collagen debris may preclude transport of ova or sperm to the uterus. The purpose of this study was to establish a laparoscopic test for oviductal patency in the mare, determine the incidence of oviductal plugs, and correlate their presence/absence to bead transport to the uterus.

2. Materials and Methods

A standing laparoscopic technique was used to cannulate the oviducts of 16 mares and instill microscopic fluorescent beads. Forty-eight hours later, abdominocentesis was performed and the reproductive tract was removed. The incidence of oviductal plugs was determined and compared with bead retrieval in the uterus.

3. Results

Beads were recovered in the uterine lavage fluid, the oviduct, or a combination of the lavage fluid and the oviduct in 31 of 32 (96.8%) of attempts. The majority (22/28; 78.6%) of oviducts had intraluminal plugs on postmortem examination. Bead recovery after uterine lavage was lower (7/22; 32%) from mares with oviductal plugs than from mares without plugs (5/6; 83%). The sensitivity and specificity of the test was 68.2 and 85.7%. Abdominocentesis results were consistent with expected postoperative values.

4. Discussion

The laparoscopic technique to instill fluorescent microsphere beads into the oviducts was successful. The presence of plugs reduced bead recovery in the lavage fluid, which suggests that plugs may reduce the ability of gametes/embryos to efficiently pass up or down the oviduct.