Unilateral Orchiectomy in Miniature Horse Stallions—Effect of Surgical Technique and Resulting Testicular Function

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Remaining testicular function may not be compromised for a prolonged period after elective unilateral orchiectomy, and resulting semen quality may not be affected by surgical technique. Authors' addresses: Department of Large Animal Clinical Sciences, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, TX 77843-4475 (McCormick, Varner, Blanchard, Sudderth, Kiser, Love); Department of Animal Science, College of Agriculture and Life Sciences, Texas A&M University, College Station, TX 77843-2402 (Valdez, Cavinder); and Dubai Equine Hospital, PO Box 9373, Zabeel, Dubai, UAE (Rakestraw); e-mail: jmccormick@cvm.tamu.edu. *Corresponding and presenting author. © 2012 AAEP.

1. Introduction
The purpose of this study is to investigate the effects of two types of incision closure (first-intension [FI] versus second-intention [SI] healing) on scrotal/body temperature and sperm quality after unilateral orchiectomy.

2. Materials and Methods
Nine unilateral orchiectomies were performed on mature Miniature Horse stallions. Semen parameters, scrotal and body temperatures, testis size, and incision healing were evaluated before and up to 60 days after unilateral orchiectomy.

3. Results and Discussion
Scrotal temperatures were lower after unilateral orchiectomy as compared with preoperative values (P ≤ 0.05). Percent sperm motility was not affected by unilateral orchiectomy (P > 0.05). Percent viable sperm and total sperm numbers were higher at 60 days compared with 14 and 30 days after unilateral orchiectomy (P < 0.05). Incision healing time was shorter in group FI (10.0 days) than in group SI (21.5 days; P = 0.05). Previous considerations for an extended period of sexual rest (≥60 days) after unilateral orchiectomy were not supported by changes in semen profile and scrotal temperatures in this group of Miniature Horse stallions. Primary closure of the incision may allow for an earlier return to breeding, based on a shorter time of healing, after the surgical removal of one testis.

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Research Abstract

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