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A low incidence of complication with a very low incidence of mortality is associated with the castration procedure. Surgical technique is among one of the most important factors in the development of complications. Authors' addresses: William D. Pritchard Veterinary Medical Teaching Hospital, University of California, Davis, CA 95616 (Kilcoyne); Department of Population Health and Reproduction, School of Veterinary Medicine, University of California, Davis, CA 95616 (Kass); and Department of Medicine and Epidemiology, School of Veterinary Medicine, University of California, Davis, CA 95616 (Watson and Spier); e-mail: isabellekilcoyne@hotmail.com. *Corresponding author. © 2011 AAEP.

1. Introduction
The objective of this study was to determine the complication rate and risk factors associated with routine castration performed in an ambulatory equine practice.

2. Materials and Methods
Case records of 324 horses undergoing routine castration by the Equine Field Service at the University of California at Davis between 1998 and 2008 were reviewed. Factors evaluated included age, breed, surgical technique, method of anesthesia, complication, management, and outcome of complication.

3. Results
Thirty-three (10.2%) of three hundred twenty-four horses developed a complication postoperatively. All horses recovered except one horse, which was euthanized as a result of eventration. Horses that underwent castration using the semiclosed approach had a higher rate of complications postoperatively (23.4%) than those horses that underwent closed castration (6.1%) (p = 0.0001). Horses that received additional doses of drugs to maintain an adequate plane of anesthesia had a higher frequency of developing complications (p = 0.04). Horses that had the procedure performed while under standing sedation did not have a higher incidence of developing a complication postoperatively (p = 0.39). There was no association with complications found for age, use of suture, or use of prophylactic antibiotic.

4. Discussion
Overall, there was a low complication rate (10.2%) and very low mortality rate (0.3%). These findings would suggest that choice of surgical technique and length of surgery are important factors in the development of complications associated with this procedure.