LAPAROSCOPIC CRYPTORCHIDECTOMY
Dwayne Rodgerson, DVM, MS, DACVS
Hagyard Equine Medical Institute, Lexington, KY

Laparoscopic cryptorchidectomy has become an accepted method of identifying and removing intra-abdominal testes in the horse. Fischer was the first to describe a laparoscopic cryptorchidectomy technique for both the standing and dorsal recumbent positions. Since his initial description, numerous laparoscopic cryptorchidectomy techniques have been described, which vary in the positioning of the horse (standing vs. dorsal recumbency), means of providing sedation, position and number of the portals, and the method used to provide hemostasis of the mesorchium.

Prior to performing a laparoscopic cryptorchidectomy procedure, the inguinal area should be thoroughly palpated while the horse is sedated. This may help determine if the testis is located within the inguinal canal and thus, prevent exploring the abdomen. Inguinal testes can be pulled back into the abdominal cavity with gentle traction or by cutting the vaginal ring. The author feels inguinal retained testes should be removed using traditional castration methods to avoid disruption of the vaginal ring.

Prior to the surgical procedure, horses are generally fasted for 12 to 24 hours to decrease the amount of intestinal contents.

Standing laparoscopic cryptorchidectomy allows for easy identification of a retained testis similar to laparoscopic approaches through the ventral abdomen. Standing laparoscopic techniques eliminate the need for general anesthesia and the elevated position of the hind end (Trendelenburg position) required to evaluate the caudal abdomen. In the standing position, the testis will often be closely associated to the internal vagina ring. In some cases, the surrounding bowel may make accurate identification of the testis difficult, but gentle traction on the distal aspect of the mesorchium will aid in elevating and identifying the testis. Bilateral retention generally requires a laparoscopic approach through both the left and right paralumbar fossa.

Laparoscopic cryptorchidectomy under general anesthesia eliminates patient movement and provides an easy method of removing both testes. The horse must be placed in a Trendelenburg position. This can be performed either by raising the table and horse together or by just raising the horse alone. The author prefers the later due to the ability to elevate the horse higher without having the horse sliding forward on the table.

Placement of the laparoscopic portals has been well described for both standing and recumbent cryptorchid procedures. Generally two to five laparoscopic portals are required depending on the method of hemostasis used and if the horse has bilateral retention. Methods of hemostasis include extracorporeal emasculation, suture loop technique, electrosurgical instrumentation, or Ligasure vessel sealing device. The Ligasure is a recently introduced vessel sealing device that permanently fuses vessels up to and including 7 mm in diameter and tissue bundles without dissection or isolation.

Following surgery, horses are confined to a stall for 24 hours, and then allowed small paddock turnout or returned to light exercise. The surgical incisions are kept clean and dry and monitored daily. Horses are often tender to palpation at the surgical site for 48 to 72 hours. Horses can generally returning to full work 5 to 7 days after surgery.