

# Laparoscopic Ovariectomy

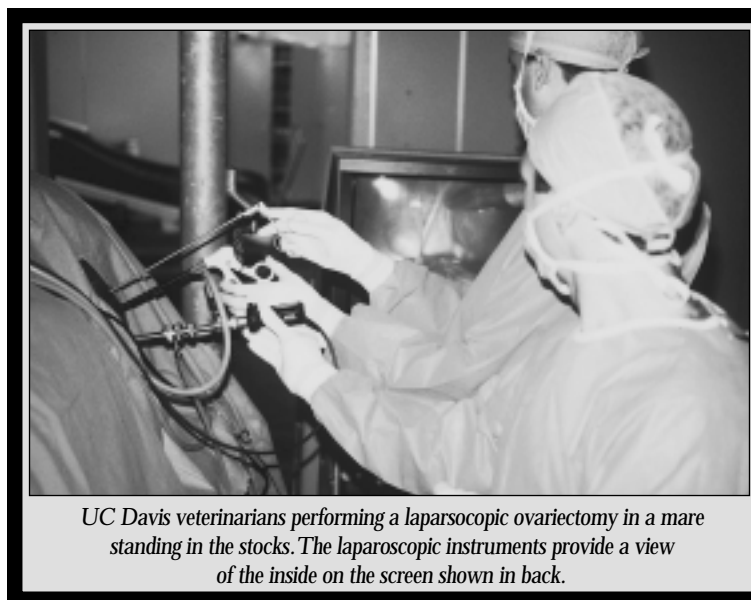
by DR. LARRY D. GALUPPO

In some cycling mares, behavior changes can make them undesirable or unacceptable as companions or athletes. Hormonal therapy is a medical treatment option, but is often unrewarding and has potential complications. Although ovariectomy (removal of the ovaries) is not very common, it is an option for horses.

There are various reasons for ovariectomizing mares, but the most common reason is because of behavioral problems. The best candidates for ovariectomy are those mares that display abnormal behavior during their heat cycles. However, in some cases, mares with continual abnormal behavior can also benefit from the procedure. In both cases, if the mare's behavior improves with progesterone therapy (Regumate), there is a better chance that ovariectomy will improve her temperament.

Although ovariectomy has the

potential to improve or solve hormonally related behavioral problems, it is not 100 percent effective, even in those cases that respond to progesterone therapy. Horseowners and their veterinarians need to discuss their treatment options before deciding if an ovariectomy is the best solution.



*UC Davis veterinarians performing a laparoscopic ovariectomy in a mare standing in the stocks. The laparoscopic instruments provide a view of the inside on the screen shown in back.*

In some cases, abnormal behavior in mares may be secondary to an ovarian tumor. Veterinarians can usually diagnose the ovarian tumors that cause abnormal behavior by palpating

the mare, and evaluating the blood for inhibin and testosterone levels. If these tumors are detected when they are small, they can also be removed using the laparoscopic technique. However, if the tumors are greater than eight to ten centimeters (approx. 3½ to 3¾ inches) in diameter, then they

should be removed surgically via a standard flank incision.

Ovariectomy in horses can be accomplished by several different techniques. The procedure can be performed in standing sedated horses or while the horse is under general anesthesia. The common techniques performed with the horse standing include: colpotomy (where the ovaries are removed blindly with a crushing instrument placed

through a vaginal incision); flank laparotomy (where the ovaries are removed blindly through one or two flank incision(s) with a crushing instrument); and laparoscopic

ovariectomy (where the ovaries are removed through two small flank incisions under direct visualization). The common techniques performed with the horse under general anesthesia include: the paramedian approach (where the horse is placed on its back and the ovaries are removed blindly through two body wall incisions with a crushing instrument); ventral mid-line approach (where the horse is placed on its back and the ovaries are removed blindly through one body wall incision with a crushing instrument); and laparoscopic ovariectomy (where the horse is placed on its back with its head down at a 35 degree angle, and the ovaries are removed through two small body wall incisions under direct visualization).

There are a few advantages for each technique, but only laparoscopy avoids general anesthesia, allows direct visualization of the ovaries and their blood supply, permits controlled administration of a local anesthetic to control pain, and allows the surgeon to place ligatures around the ovarian pedicles to control bleeding. Laparoscopic ovariectomy is a much safer technique with fewer complications. In addition it also has an improved cosmetic end result from the two small incisions. After following the results of over 40 laparoscopic ovariectomies performed at the University of California Davis Veterinary Medical Teaching Hospital (VMTH), UC Davis veterinarians prefer this technique for ovariectomizing mares.

Laparoscopic ovariectomy in standing horses is performed with the horse placed in standing stocks. Mares are given a sedative and pain medication to prevent them from moving during the procedure, as well as to provide pain relief. The left and right flanks are prepared for sterile incision and then a surgical drape is placed over each site to ensure sterility. After blocking the skin with lidocaine, the surgeon introduces a laparoscope into the left flank to observe the left ovary. The ovary is then blocked with lidocaine so that the mare does not feel

the procedure. Surgical laparoscopic instruments are inserted through the flank to dissect the ovary from the uterus and apply a single ligature. The ovary is then snared with a ligature loop, which is tightened to prevent bleeding. The ovary is then cut from its pedicle and removed from the abdomen. The ligature remains on the pedicle to ensure that the vessels will remain sealed. The right ovary is then removed in a similar fashion and all incisions are closed with sutures.

After the procedure, mares are given banamine for three to five days to control postoperative pain. Sutures are removed in two weeks. Stall rest and hand-walking is recommended for four to six weeks after the surgery, after that time, the mare can resume her normal activities.

The average cost for the procedure is approximately \$1,200 and for more information in this regard, one can contact the UC Davis VMTH at (530) 752-0290.

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