LAPAROSCOPIC OVARIECTOMY IN THE DORSALLY RECUMBENT HORSE
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Laparoscopic ovariectomy is most commonly performed in the mare for behavioral issues or to remove an abnormal ovary (granulosa cell tumor or others). Laparoscopic techniques for ovariectomy provide excellent visualization of the ovary and its blood supply to insure adequate intraoperative hemostasis precluding some of the complications associated with other approaches (colpotomy, midline or parainguinal celiotomy).

Horses undergoing laparoscopy under general anesthesia are fasted for 18 hours prior to surgery. Water is not restricted. Tetanus prophylaxis, anti-inflammatories and antibiotics are administered preoperatively.

The horse is anesthetized and placed in dorsal recumbency. The horse should be fixed to the table to prevent sliding forward when entering Trendelenburg position during the surgery. A cross strap across the chest with padding is used to help stabilize the horse. The rear limbs should be tied down but without excessive tension. The table should be capable of achieving 30 degrees or more of elevation of the rear of table. The abdomen is prepared for aseptic surgery from 15 cm cranial to the umbilicus extending caudally. A stab incision is made through the umbilicus and the abdomen is insufflated to 15 mm Hg with CO2 through a teat cannula. The teat cannula is then exchanged for a trocar/cannula assembly which will accommodate the laparoscope. Once safe entry into the abdomen has been confirmed, the horse is tilted into Trendelenburg position and additional portals are established on each side of the abdomen paying attention to position them close enough to the ovaries to allow instrument access. The uterus is identified, grasped with atraumatic grasping forceps and elevated to find each ovary. Once the ovaries are located and assessed for adequate surgical exposure, ovariectomy can proceed. The proper ligament of the ovary is transected creating a pedicle with the ovary and mesovarium. The mesovarium with the ovarian blood vessels may be ligated with a ligating loop, transected with an endoscopic stapler (endoGIA) or coagulated and transected with a tissue sealing device such as Ligasure or Endoseal Rx or coagulated with bipolar cautery and then transected. Prior to final transection of the ovarian vascular supply, tension is released on the pedicle to check for any hemorrhage that may not have been evident while under tension. Once the ovary is separated from its attachments, it is either parked on top of the bladder or held with an additional instrument until removal at the end of the procedure. The procedure is repeated for the remaining ovary. The ovaries are removed through the enlarged umbilical incision by a forceps which is inserted parallel and through the same incision as the laparoscope. Specimen bags may be used to facilitate removal. The linea is apposed with #1 or larger Vicryl and the skin is apposed with 2-0 Vicryl in an intradermal pattern.

There is minimal aftercare associated with this procedure. Some mares will be depressed for several days but this is not that common. Anti-inflammatories are continued for several days post-operatively. The horses are walked daily and allowed to return to training in several weeks (up to 2 months in horses with large incisions).

The most common complications are intraoperative hemorrhage, loss of the ovary within the abdominal cavity and inability to safely visualize and transect the ovarian blood supply.